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of the South and Southwest as the Nation's Greatest Material Asset

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PRESIDENT HARDING'S APPEAL FOR A SHIP SUBSIDY MUST FIRST BE BACKED BY PRESIDENT HARDING'S REPUDIATION OF LAW-BREAKING BY THE SHIPPING BOARD.

PRESIDENT HARDING is vigorously working to secure a bonus for the maintenance of an American merchant marine. In this he has the hearty support of a very large proportion of the people of this country who have studied the subject.

Nearly a third of a century ago the Southern Cotton Manufacturers Association in a meeting attended by several hundred of the leading men in the industry, enthusiastically passed a resolution in favor of subsidizing our merchant marine, and far-seeing men of the South, as of other sections, have realized that without some help of this kind it will be impossible to maintain our merchant marine in competition with the great maritime nations, and yet the fullest development of our commerce and our protection in time of war depend absolutely upon a maintenance of our ships.

However great may be the need for this protection and upbuilding of American shipping, it will be worse than folly for President Harding to anticipate the possibility of a bill being passed through Congress in favor of a subsidy unless that bill carries with it a provision that the law breaking activities of the Shipping Board in the matter of selling liquor on American ships shall be abolished. We believe it is in the power of President Harding as the law now stands, to compel its enforcement, and unless he promptly repudiates Mr. Lasker's position as head of the Shipping Board in selling liquor on American Ships, President Harding will have to stand responsible before the country for this outrageous and unpardonable violation of our law.

A New York business man writing to the MANUFACTURERS RECORD on this point makes the following very clear presentation of the case.

"I entirely agree with you concerning the letter of Mr.

Lasker. * * * * He has assumed the attitude of nullifying the territorial rights of the United States on their own ships on the high seas by begging the question in stating that the law did not, so far as he interpreted it, apply to a ship on the high seas, which by inference from what he says, is a ship without a country."

American ships, flying the American flag, are, as this writer says, judged by Mr. Lasker's statement, uncontrolled by the laws of this or any other country; for if one can be broken, all laws can be broken.

The Wall Street Journal on this point says:

"If Mr. Lasker of the Shipping Board can defy the Constitution of the United States, its 18th Amendment, the Federal Statute expressed in the Volstead Act, and the plain rulings of the Courts in selling liquor on Shipping Board ships, he can develop lawlessness to still more profitable purpose." And in another editorial on the same subject it says:

There are two principal objections to Mr. Lasker's attitude in regard to selling liquor on Shipping Board vessels. One is that it is illegal, and the other that it is immoral for the government, through any of its agencies, to do something that it calls a crime when done by an individual. More will be heard of this matter in congressional discussions of the ship subsidy bill.

Mr. Lasker claims that he has a legal right to sell liquor outside the three-mile limit on the high seas. He is referred to Oppenheim's International Law, Volume I, Paragraph 146, where the law is laid down that vessels and the things and persons thereon, while on the open sea, remain under the jurisdiction of the government under whose flag they sail. If a seaman or a passenger on board one of those vessels should kill another, would Mr. Lasker say he was immune? Certainly the courts would not.

There may be differences of opinion as to the wisdom of the Volstead law, but there should be no difference of opinion as to the necessity of obedience to all the laws. We pride ourselves on the fact that ours is a government of laws and not of men. A labor leader recently threatened defiance of the law, and preaching that to his followers, won no sympathy from public opinion. But our government whose very existence depends upon obedience to the law is, by precept, teaching disobedience. It has sent many to prison for bootlegging while it sets up its own bars and dispenses liquor. Such things do not inspire respect for law.

What right has a government to declare a certain act wicked and immoral, prosecute and send men to jail for breaking the law which forbids it, and then do the very thing itself, saying, when reproached with inconsistency, "We need the money?" It is a pitiful exhibition for this great government.

The entire country has been shocked by Mr. Lasker's action, and then by his weak and silly attempt to defend it. But more than that, it has been shocked to a still greater extent by the failure of President Harding the moment he knew of this law violation to take steps to prevent it, and thus to maintain the nation's laws.

HOW GREAT BRITAIN COULD PAY ITS IN-DEBTEDNESS TO AMERICA.

LORD LEVERHULME, accounted by many as the greatest business man in England, and likewise probably the wealthiest, has recently made a second trip to the United States studying the Prohibition question. A year or more ago after looking into the whole Prohibition situation in America, he was quoted as saying that if the United Kingdom had Prohibition, the saving in the drink bill would be sufficient to repay Great Britain's indebtedness to the United States in less than five years.

Lord Leverhulme, as soon as he heard of the pamphlet entitled "The Prohibition Question" which the MANUFACTURERS RECORD published a few weeks ago, wired for a copy and at that time the occasion was taken to ask him if he had been correctly quoted a year or so ago, and in reply we have the following letter:

"I am in receipt of your letter of the 2nd inst. and it is quite correct that I stated a year or so ago that if we had Prohibition in the United Kingdom the saving in our drink bill would be sufficient to repay our indebtedness to the United States in less than five years. I am still of the same opinion.

"My own views expressed at the same time are that my preference is for educational work as to the injurious effects of alcohol, and that I would rather have a nation to which alcohol was accessible but to which it had no attraction than a nation to which alcohol had been prohibited.

"I believe myself that Prohibition in the United States will remain a feature of the national life, and I hope for all time, and that the present difficulties with 'bootleggers' will gradually cease. They are, possibly, at the present time at their most extreme point, but as the generations which had cultivated a taste for alcohol gradually dwindled away and a new generation sprang up which knew not alcohol the occupation of the 'bootlegger' would have gone."

Here is a view of one of the world's greatest business leaders, a man noted throughout the world for the attention which he has given to the betterment of labor conditions, and taking a world-wide view of the situation he confirms the report that in his opinion if the United Kingdom had Prohibition, the saving in the drink bill in the next five years would be sufficient to meet Great Britain's indebtedness to the United States.

Lord Leverhulme also takes the ground that he believes that Prohibition is a permanent feature of the national life of the United States, and that as the generation accustomed to drinking passes away and a new generation comes on, the present difficulties with bootleggers will gradually cease.

PUNISH THE GUILTY IN HIGH PLACES.

IF Chairman Lasker of the United States Shipping Board, who violated the law by selling liquor on American vessels, and Governor Ritchie of Maryland who violated the law by accepting a present of a box or basket of bottles of whiskey, are not prosecuted for their illegal acts then it is almost criminal to prosecute men less prominent in social and political life.

These two men, standing for high political position, have

done that for which the bootlegger and his accomplices are punished, and the same punishment that is meted out to one violator of the law should be meted out to the others, or else all law becomes a travesty and justice hids its head in shame.

GREAT DECREASE IN QUANTITY COTTON HELD IN STORAGE.

DURING the ten months ending May 31, 4,945,497 bales of cotton were consumed by American mills, or an increase of 924,884 bales over the corresponding period of last year. On May 31, 1,419,836 bales of cotton were held in consuming establishments against 1,280,723 on May 31, 1921; but there were reported held in public storage and at compresses on May 31, 2,561,007 bales compared with 4,738,267 bales May 31, 1921, a net decrease of 2,038,147 bales in the reserve supply.

The total quantity of cotton exported for the ten months ending May 31 was 5,451,800 bales compared with 4,701,671 bales exported during the same period of 1921.

Imports of foreign cotton during this period have increased from 212,784 to 342,216 bales ending May 31.

A SCHOOL BOY HITS THE BULL'S EYE.

ABaltimore County school boy, Stanley Schmidt, in his graduating essay at Towson, Md., High School, closed his paper, which was in defense of the 18th Amendment, as follows:

"The anti-prohibitionists think only of themselves, while the prohibitionists are striving to mold the future, in which the welfare of the country and its citizens is concerned."

It would be difficult for any one to state the case more clearly than this youngster has done.

The whole fight of the anti-prohibitionists is for their own personal gratification of liquor drinking or the desire of the liquor interests to seek a profit out of others.

The whole fight of the prohibitionists is to help better mankind and lift the pall of woe and of suffering from women and children who have had to endure poverty by reason of the drunkenness of husbands and fathers.

Which do you prefer?

DROP IN DIAMOND PRODUCTION AND IMPORTS.

SCARCITY of high grade diamonds is reported in the markets of Europe and this explains, in part, states the Trade Record of the National City Bank of New York, why our own importations of diamonds will be about \$32,000,000 for the fiscal year compared with \$89,000,000, the high record of 1920. However, the annual average value of diamond imports, excepting 1920, has been about \$30,000,000. This country is said to own half the diamonds of the world, or approximately \$1,700,000,000 worth of the precious stones.

Our rank as a holder of half of the world's diamonds has not been materially minimized by the slowing down of our imports in the past two years, especially as this decrease was simultaneous with a big reduction in the output of South Africa. That country has for many years been the world's chief producer of diamonds and the very latest reports from that field indicate that while the outturn of the South African mines averaged about \$40,000,000 a year in the three years ending with 1919, the output since that date has been extremely small owing in part at least to the fact that the European markets were being flooded with high grade diamonds formerly owned in Russia. Some day Arkansas will, we hope, become a great diamond producer, for apparently it has a promising diamond field.

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HON. REGINALD MCKENNA OF ENGLAND TO SPEAK AT ANNUAL MEETING OF AMERICAN BANKERS ASSOCIATION.

THE American Bankers Association has sent out from its New York office an interesting statement in regard to the Honorable Reginald McKenna, former Chancellor of the British Exchequer, in connection with the proposed address by him at the annual convention of the Bankers Association in October next. In announcing the coming of Mr. McKenna the American Bankers Association sends to the public the following:

"New York, June 8—Indications that Europe's financial situation will have a first-hand hearing by American bankers are seen in the selection of the Rt. Hon. Reginald McKenna, former Chancellor of the British Exchequer and an outstanding figure in European finance, as one of the chief speakers at the annual convention of the American Bankers Association to be held in New York, October 2 to 6. It was announced to-day that he had accepted the invitation.

"Mr. McKenna, who is now chairman of the London Joint City and Midland Bank, has had a distinguished career in English public affairs. He entered public life from the practice of law as a member of parliament in 1895. He subsequently occupied the posts of Financial Secretary of the Treasury; President of the Board of Education; First Lord of the Admiralty; Home Secretary; and Chancellor of the Exchequer. His addresses on reparations, interallied debts and other great international financial questions have attracted world-wide attention."

It is exceedingly interesting at the present time to have this enthusiastic endorsement of the outstanding ability of Mr. McKenna, for his financial views have been so directly contrary to the policies adopted in this country by the Federal Reserve Board and the banks under its domination, that we are glad to be able to publish, in connection with this hearty commendation of Mr. McKenna's great abilities, a statement from the MANUFACTURERS RECORD of some months ago, in which, referring to financial matters, Mr. McKenna vigorously and aggressively criticised deflation as having doubled the indebtedness of Great Britain for instance, and given the creditor a huge premium at the expense of the debtor.

In the course of that statement he said that "deflation of this kind can only end in the strangulation of business and widespread unemployment."

We trust that Mr. McKenna will give the bankers of this country an elaboration of these views, which if they had been put into effect and maintained in this country and in England would have saved us from the world business chaos through which we have been passing.

In the course of his statement to which we have referred Mr. McKenna, who is now President of the largest bank in the world, said:—

"Let us look at the policy of monetary deflation to be obtained by a high bank rate and a restriction of credit. Let us suppose that it were practicable by this process to bring prices permanently down to prewar level. What sort of charge would our national debt then mean to us? It ranks to-day at \$9,700,000, mostly borrowed when money was worth very much less than before the war. With prices back to their former level, the true burden of the debt would be more than doubled, or, in other words, the creditor would receive a huge premium at the expense of the debtor. * * *

"I think I have said enough to show that an attempt at monetary deflation of this kind can only end in the strangulation of business and widespread unemployment. * * *

"Monetary inflation, unlike speculative inflation, is not a temporary condition capable of remedy by raising the bank rate and restricting credits. Prices in this case are forced up over a protracted period of time, wages and contracts of all kinds are adjusted to new price levels, and fresh capital is embarked in business on this basis. In circumstances such as these the first effect of an attempt to force down prices by monetary deflation must be to cause general trade depression. * * *

"The consequences of a continuous fall in prices, entailed

by dear money and restriction of credit, and accentuated by heavy taxation, must be complete stagnation of business."

This statement of Mr. McKenna should be read in the light of the commendation given to his financial genius by the American Bankers Association.

ELECTRIC ENGINE THE LOCOMOTIVE OF THE FUTURE.

THE idea of applying the principle of the steam turbine engine to locomotives has been before the public for several years but not, so far, with apparently any conspicuous success, as railroads continue to purchase locomotives of the familiar types. The turbine advocates are persistent and adhere to the opinion that ultimately the principle will be satisfactorily applied to railroad engines if it has not already been so utilized, and the Railway Age, in a recent issue, reports the construction of a condensing turbine locomotive in Sweden by the Aktiebolaget Ljungstroms, Angturbin, Stockholm. This engine is being operated on the Swedish State Railways and is reported to have shown notable economy in the use of fuel, a very important accomplishment in view of the high prices prevailing for coal.

This locomotive is of peculiar form in that the driving machinery and wheels are all under the tender, the forward wheels being only in trucks to carry the boiler, cab, etc. Seven tons of coal are carried in bunkers which extend on each side of the cab and also above it giving the rear end of the boiler a very heavy and odd appearance. It is especially noted that the engine is not merely an adaptation of the turbine principle to a reciprocating locomotive but is wholly a new design. The boiler carries 285 pounds steam pressure per square inch and it has no small tubes, all being large and each having a superheater element. The driving wheels are 58 inches in diameter. It is stated that as compared with reciprocating locomotives used in the same work the new engine shows a saving of 52 per cent in fuel consumption.

Interesting and important as this new invention may be the trend of locomotive practice is toward the large and fast electric locomotive, rather than toward a steam locomotive of improved design and construction. The success achieved on the Chicago, Milwaukee & St. Paul Railway in handling traffic over mountain divisions with electric engines under the most adverse weather conditions, as well as the remarkable records made with electric locomotives on the Baltimore & Ohio Railroad, the Norfolk & Western Railway, the New York, New Haven & Hartford Railway and other lines in handling traffic under special conditions, have highly demonstrated the superior qualities of the electric locomotive, and it may be confidently asserted on high authority that about the only obstacle to a much greater utilization of electric power for moving trains is the enormous outlay which the railroads would have to make in order to accomplish such a desirable result.

CROPS THAT ARE REPORTED LARGER THAN LAST YEAR.

BASED on conditions June 1, the 1922 wheat crop is estimated at 855,000,000 bushels by the Agricultural Department. This amount is 60,000,000 bushels greater than the 1921 crop, 56,000,000 bushels greater than the five-year average crop of 1916-1920, and 94,000,000 bushels larger than the average of 1913-1917.

The oat crop forecast of 1,305,000,000 bushels is 108,000,000 bushels below the five-year average crop, but it is above the low production of 1921 by 244,000,000 bushels.

The forecast for barley production indicates a crop of 191,000,000 bushels, or 40,000,000 bushels greater than the

1921 crop and 6,000,000 bushels below the five-year average.

The production of rye is estimated at \$1,000,000 bushels compared with 58,000,000 bushels in 1921, and the average of 50,000,000 bushels for the five-years 1913-1917.

If the forecast of a crop of 106,000,000 tons of hay is confirmed by the production, it will exceed 1921 by 9,000,000 tons and the five-year average by 4,000,000 tons.

The estimated apple crop of 180,000,000 bushels is barely above the five-year average, but it is 84 per cent above last year's crop. The apple blossoms and set fruit were damaged by spring frosts in nearly all regions and a heavy June drop of fruit is feared.

Peaches also suffered by the spring frosts, but on June 1 there was a prospect of a 54,000,000 bushel crop, an increase of 21,000,000 bushels over 1921 and about 10,000,000 bushels above the five-year average production.

TEN YEARS' DEMONSTRATION OF SOUTHERN ENERGY AND ADVANCEMENT.

BEARING the title "Southern Railway System 1911-1920, A Record of Growth," a pamphlet issued by the Southern Railway Company presents a comprehensive and accurate, as well as a stimulating review of ten years of progress on and along its lines of 6971 miles.

President Fairfax Harrison says in the way of an introduction:

"The purpose of this pamphlet is to set forth in convenient form, for the information of stockholders, bondholders and others who may be interested, the salient facts concerning a decade of growth and progress in the territory served by the Southern Railway System, the consequent expansion of its traffic, the enlargement of the railroad facilities to care for that traffic, and the operating results which have followed. It is put together and distributed at this time as a testimony of sustained and renewed confidence in the future at once for the property, the South and the United States."

These heartening expressions constitute a fitting foreword to the impressive exposition of facts that ensue. The Southern Railway lines reach from the Atlantic Ocean to the Mississippi River and from the Potomac and the Ohio Rivers to the Gulf of Mexico. Within this extensive radius are to be found,—to quote from the pamphlet:

"The thriving industrial communities of the Piedmont region, the resort localities of the Appalachian mountain ranges, the richly mineralized areas of eastern Tennessee, western North Carolina, and Alabama, including the Birmingham district, the fertile valley of the Tennessee River with its potential water power at Muscle Shoals, the productive Shenandoah Valley, the apple, grain, and beef growing counties of Piedmont Virginia, the similar blue grass region of Kentucky, the tobacco fields of southside Virginia and North Carolina, the peach growing section of Georgia, the black soil belt of Alabama, and the early vegetable farms and citrus fruit orchards of northern Florida, southern Georgia, Alabama and Mississippi."

Statistics of railroad traffic on the Southern Railway, which on account of its great extent is thoroughly representative of the South's entire traffic, shows that in 1911 these lines performed freight service amounting to more than 6,000,000 ton miles and in 1920 to more than 11,000,000,000 ton miles, an increase of over 90 per cent. The passenger service performed in 1911 was more than 935,000,000 passenger miles and in 1920 it was more than 1,500,000,000 passenger miles, an increase of over 66 per cent. Commenting on this the pamphlet says:

"The growth of traffic of the Southern Railway System has far outstripped the growth of population and in representative industrial activities in the territory served."

Concerning the increase of railroad facilities it is observed that in 1912 the Southern Railway System had only 443 miles double tracked, but that in 1920 there were 1021 miles double tracked, including the Washington-Atlanta route of 637 miles. Corresponding advancement was also made in general railroad facilities comprising passing tracks, engines of greater

power and cars of larger capacities, enlarged yards, improved stations, signals, etc.

This comprehensive exposition of ten years of progress will not only be appreciated by those who are directly interested in the Southern Railway Company and its future, but also by the general public to whom the steadily increasing success of the South is becoming more and more a matter of vital concern and appreciation.

Moreover, it is just announced that 100 pound rail has been adopted by the Southern as the standard for its main lines in place of 85 pound rail, the heaviest used on the road up to this time, so vice president H. W. Miller in charge of operation states, and the first stretch of track to be relaid with the heavier steel, will be on the Washington-Atlanta double track line between Washington, D. C. and Manassas, Va., 33 miles, where it will not be long before the trains will run on the 100 pound rails. The rails and the fastenings to bind them together are already on the ground and will be put in place as soon as the heavy traffic of the peach and the watermelon season is over and the new rails will be laid on extra heavy tie plates, giving added strength and safety. Then the 85 pound rails which will be released after the installation of the 100 pound rails will be employed in the replacement of lighter rails on branch lines of the system where the volume of traffic justifies the use of heavier rails than those now in the tracks.

OUR MERCHANT MARINE AND FOREIGN COMMERCE.

IN a statement made in behalf of the development of our Merchant Marine, Jonathan Bourne, Jr., president of the Republican Publicity Association, said:

"No other section of the country has more to gain in the next fifty years from the development of American foreign commerce than has the South. This will be apparent even a cursory consideration of the commercial situation.

"The two great undeveloped sections of the world are Africa and South America. In those continents will be found the next frontier. The vast areas of untrod wilderness, the unmeasured resources of water power, the uncounted millions of feet of merchantable timber, the untouched deposits of mineral wealth, constitute latent resources the development of which offers unexcelled opportunities for men of vision and enterprise.

"Compared with what the United States can hope to gain in commerce with devastated Europe, the wealth of trade offered by Africa and South America are immeasurable. To the United States those continents will look in chief degree for the capital, for the engineering skill, for the managerial ability, for the construction machinery, for the implements and the equipment that are always necessary in the period of development of any new region. These two continents are inviting American enterprise, and whatever trade may be developed with those continents will most easily and naturally flow through the ports of the Southern states.

"The center of production in the United States is a short distance southwest of Indianapolis, Ind. By drawing a circle with that point as a center it will be immediately ascertained that Southern ports, on an average, are nearer the center of production than ports in the Northern states. To this advantage of a shorter rail haul the Southern ports add the advantage of closer proximity by ocean route to Africa and South America.

"This being true and the future development of foreign trade depending so largely upon the control of ocean transportation, it seems incredible that Southern statesmen would oppose any plan that promises to place our carrying trade under the American flag.

"So far as possible, Great Britain, with the advantage of her mandates, and Germany, with the advantage of cheap production, will endeavor to secure for themselves the trade of Africa and South America. Only by going after business aggressively and bending every effort and resource to the attainment of the desired end, can the United States hope to gain and keep her share of an international and mutually enriching commerce probably unsurpassed in the history of the world."

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VIEWS OF A LEADING NEW ORLEANS BANKER.

MR. CHARLES DEB. CLAIRBORNE, Vice-President of the Whitney-Central National Bank, of New Orleans, and Chairman of the Committee of Five of the American Bankers Association on Exchange, keeps up his vigorous fight against the autocratic, despotic methods of the Federal Reserve Board, and writing to the MANUFACTURERS RECORD under date of June 16 he says:

"I am enclosing herewith a copy of a letter showing that the Federal Reserve is still attempting to make use of its "Big Stick" over the state chartered institutions, thereby depriving the states of their sovereignty over their own creatures. Rightly or wrongly you can see that the writer of this letter, due to the letter received by him from the Federal Reserve concludes that they have a **right to use any agency they see fit**, although thus far no court has held any such conclusion.

"You will note in the closing words of his letter the fear which that System seems to have instilled into this country banker, yet the Federal Reserve denies most vehemently, and says in their Annual Report, Page 69, that, "The Board has investigated the charges that have been made against Federal Reserve Banks as to the use of oppressive methods in the collection of checks, and in no case have the facts as brought out sustained the charges."

"It is very strange that the San Francisco court which recently went into the matter more carefully than the Federal Reserve, decided that that System was guilty of 'coercion,' but the Board in their report set themselves above the courts of this country and say they are not guilty. This report is very much like the story of the negro who was in jail, and his lawyer told him that they could not put him in jail, and the negro said, 'That may be, boss, but I am in jail.' The Federal Reserve may state that the result of their investigations does not sustain the charges, but other people who have investigated know better and bring in a different report, and the Board are not only not satisfied with making such a statement, although they have never denied what has repeatedly appeared in the public press, but we find on another part of Page 69, what I consider a disgraceful statement on the part of a Board, a unit of our Government, the following statement:

"Organized opposition to par clearance has attempted to make much of the decision of the Supreme Court and has distorted its meaning and effect."

"They are very careful not to state who distorted, but satisfy themselves with the general statement, 'organized opposition.'

"I would like to ask the Federal Reserve on what occasion and at whose instance was the decision of the Supreme Court distorted in order to deceive any one. Is the Federal Reserve to have the right in its Annual Report to slander people and no one have recourse? Not satisfied with their attempt to take away from the States the sovereignty over their own institutions, they dare in their annual report to insult those who question their campaign.

"I merely write you this letter to show you that the Federal Reserve Board have made up their mind that they are going to force this matter over whether the banks like it or not, and unfortunately the average banker, either is not disposed or has not the courage to oppose such actions on the part of that System for fear that such attacks might be unpopular."

The letter from Texas which Mr. Claiborne encloses with the request, however, that the name of the banker writing it be not published for fear that it would bring down upon his head the "Big Stick" of the Federal Reserve Board, is as follows:

"I hand you herewith quite a lengthy letter received from the Federal Reserve Bank of Dallas in today's mail which is self-explanatory.

"I notified this bank that we would not par with them and they said they would kindly take our name off of the par list and we started deducting the charge from their cash items. They have drawn on us for these charges and I have paid same and have agreed to remit at par until we could see further into it and would advise them later as to whether we would continue to par or charge them exchange on their letters.

"Do you know of any cases in Texas where there is a bank charging exchange to the Federal Reserve? Do they

have all of the banks of Texas on their par list? What has been the experience of banks over the country in regard to this matter? Do you think it would be advisable for us to fight them on this matter unless we can get concerted action over the State? You will note that Mr. Coleman says we can remit in coin or currency at their expense also that they have the **right to use any agency they see fit**. It would be rather expensive for us if they should use the "Big Stick" as we are off the railroad and do not carry much cash on hand."

What an infinite pity that the financial system of America should be dominated by a Board, of whom such a man as Mr. Claiborne, vice president of the largest national bank in the South and chairman of one of the most important committees of the American Bankers Association, feels compelled to write as he has done in the letter which we published.

UNMUZZLE THE PRESS.

CONTINUATION of war time taxes on the newspapers of the country is an unjust penalty on the wide distribution of information. It is a direct check on a free press and free speech. It tends to break the country up into communities of local views and narrowed vision instead of a citizenship with a broad, nation-wide attitude toward the questions of the day. The war tax on second-class mail subject to zone rates was made in the form of four successive annual increases that constitute an increase from 100 per cent for the initial zone to 900 per cent on the last zone. This in some cases means confiscation of the small newspaper properties.

A bill, known as (H. R. 11965) and introduced by Congressman M. Clyde Kelly, is now pending in Congress for the reduction of the war taxes levied in the present high postal rates. It is but right that the press of the country should protest against the severity of the imposition which tends to jeopardize its freedom of expression and even its very existence. In the past, newspapers and other publications have been taxed out of existence and unless publications are relieved of this excessive postal charge it will be necessary for many to suspend or be merged. The effect of this would be the opposite of what the advocates of the higher postal rates contend. It would drive individual publishers out of existence and make stronger the few remaining large publishing corporations.

One fact that has been pointed out and must not be overlooked is that the revenue accruing to the Post Office from its operations need not be direct or paid in postage or in money to be measurable, and that the indirect returns are specially noteworthy in connection with the distribution of second-class mail matter. The report of the Penrose-Overstreet Commission refers to the fact that "second-class matter is itself the cause of a great volume of first class matter upon which the Department reaps a handsome profit." This second-class matter not only finds and creates business throughout the country but it thus adds to the volume or first class mail which this increased business produces.

Public integrity, political and social freedom depend upon the intelligence and character of our citizens. Probably the great majority of our people are dependent upon the press for intellectual inspiration. An enlightened press will make illiteracy, isolation and superstition give way to progress and prosperity and thus strengthen the moral and social fibre of a people. To fulfill this mission it is necessary that the channels of communication—the transportation of the mails—be kept open at reasonable rates for the newspapers and magazines. The citizens of the United States cannot afford to have the press muzzled by confiscatory transportation charges of the present high second-class postal rates, any more than the business of the country can be shackled by uneconomic and excessive freight charges.

NEW ENGLAND MANUFACTURERS MOVING SOUTH WHERE INDUSTRY IS WANTED AND ENCOURAGED.

ROBERT ARMORY, president of the National Association of Cotton Manufacturers, in an address before that Boston last April, said:

"We have the skill and the capital, but capital will always go where it can get the largest return and it can move easily. Skilled management moves more slowly because these men like to live in New England, but they, too, will eventually go where there is the largest opportunity and they have been going faster than is generally realized."

In fulfillment of the foregoing, and as the direct result of the labor troubles which has kept the large spinning plant of the Jenckes Spinning Company, Pawtucket, R. I., closed for some months, the company writes the MANUFACTURERS RECORD that it will move an appreciable amount of spinning machinery to its Loray Mills Plant at Gastonia, N. C. A contract has been awarded to the Aberthaw Construction Company of Atlanta for a five story mill to cost approximately \$200,000. This mill will house approximately 40,000 spindles, all of which will be transferred from the present Pawtucket, R. I., plant of the company.

Mr. Amory, speaking further on the subject, brought out the following pertinent facts:

"Our principal competition comes from the Piedmont district of North and South Carolina. There the climate is good and bracing. The operatives are pure bred American stock from the mountains. Like our original New Englanders they have had hard work to make a living and appreciate opportunity. Work is not only a necessity but also a pleasure. These people are of great native intelligence and quick to learn. Mills have sprung up on every hand. Every little town wants a mill and offers free land, exemption from taxation, and all sorts of encouragement to the man who knows how to make cloth and will start the mill.

"Our natural handicaps in the nature of transportation distances are great. Our long experience and, therefore, great skill can overcome some of these things but we shall have to work hard. We cannot overcome the handicaps of the 48-hour law against 55 and 60 hours' running time, not to speak of the six extra holidays.

"The record is clear enough, the cotton industry is gradually slipping away. In the past, various factors have helped us. Massachusetts had far more skilled help and oversight. We had the finishing works where Southern goods must be shipped to be bleached, dyed, or printed. Now, there is excellent skilled help and supervision in the South. * * *

"Many well-posted manufacturers have gravely considered and state that it is folly to enlarge Massachusetts cotton mills—it is better to go where industry is wanted and encouraged."

INTERESTING VIEWS ON LAW AND ORDER EXPRESSED BY A NEGRO PAPER OF MISSISSIPPI.

ON the great plantations of the Delta & Pine Land Company operating many thousands of acres in the Mississippi Delta region, there are a large number of negro tenants. They publish a paper entitled the "Cotton Farmer" edited by a minister of their own color.

It is always interesting to look over the "Cotton Farmer" and study what these negroes are saying about themselves and their work, and the hearty commendation which they give in their paper to their employers. But there are some other features of this paper worthy of special interest devoted constantly to the effort to teach honesty and morality and uprightness of life to the colored folks. In a recent issue quoting from an article in the MANUFACTURERS RECORD in regard to the necessity of law observance, that paper stressed some truths addressed especially to the colored people of that community, but which may be studied to good advantage not only by the colored people of this country, but by people of all classes in all sections. It said:

"It would be well for all, regardless of rank or station in

life, to take notice of the swing of the pendulum towards law observance and law enforcement.

"Our people especially had better get it out of our heads that we can earn a living by idlesome doings and sharp practices. Where one can get a good cropper's credit, good houses to live in, good land to work, opportunities to give his or her children the chance to learn to read, write and figure, and become an expert cotton producer, and the protection of life, it would be well to avail themselves of the opportunity, before that door of opportunity is closed. God has placed before our people in the South an opportunity, as little as we may think of it, not within the reach of other groups of poor people. Of course the writer knows that to many of our people this argument is like putting water on a duck's back, but still we have faith to believe that a sufficient number will take heed to help solve the great problems confronting our people, and one in which the thoughtful, interested white people are deeply concerned for the good of all.

"Our group must cease to condone the crimes of our own people, whether it be friend, son or daughter, brother or sister. We must cease to take sides with people we know to be wrong.

"It is even difficult in the church or the lodge to enforce the rules, regulations and laws on account of the disposition of our people to endorse the wrongdoings of their kinsfolk. Then again, a hard-working, industrious tenant will get all upset because the management is not willing for a trifling cropper, who happens to be kin to him, to neglect his crop and idle around.

"LET THE LAW-ABIDING, INDUSTRIOUS PEOPLE FULLY CO-OPERATE AND ALL THINGS EVENTUALLY WILL BE WELL."

Here are some great truths preached by a negro minister—editor to his own people but of equal importance to men of social standing wherever found who violate law.

DECREASE IN SHEEP AN UNFORTUNATE SITUATION IN MEAT PRODUCTION.

BETWEEN 1850 and 1870 the number of sheep in the United States nearly doubled, increasing from 21,000,000 to 40,000,000.

Between 1870 and 1880 there was no increase, but there was a gain in the next ten years of nearly 4,000,000; and by 1910 the number of sheep in the country had increased to 52,448,000.

Since then there has been a very alarming decrease, and in 1920, according to the Census Report, we had only 35,000,000 sheep.

The number of sheep in the South decreased from 9,000,000 in 1910 to 6,690,000 in 1920.

It is easily seen that under this tremendous decrease in the actual number of sheep and in the proportion per capita we can find a reason for the high price of mutton and lamb, and see the danger ahead of us in a decreased supply which will bring about higher prices on other meats.

Between 1910 and 1920 our population increased by 13,738,354 while the number of sheep actually decreased during the same time by 17,400,000.

HENRY FORD'S RAILROAD AND PROHIBITION.

MR. F. L. Rockleman, of the Executive Department of the Detroit, Toledo & Ironton Railroad Co., in reply to a letter from the MANUFACTURERS RECORD to Mr. Henry Ford in regard to Prohibition on his railroad, the Detroit, Toledo & Ironton, writes:

"So far as our rules are concerned we prohibit entirely the use of intoxicating liquor on our right of way."

This seems to go a little farther than any other railroad, for not only does it prohibit the use of liquors by the train men, but it prohibits the use of liquors by anybody on the right of way of the entire railroad system. Evidently Mr. Ford and his associates in the management of this road are believers in rigid Prohibition.

Systematic and Adequate Development of Southern Water Power Essential to Fullest Prosperity of This Section.

TRANSPORTATION AND INDUSTRY DEPENDENT UPON SUCH DEVELOPMENT—COMPLETE CO-OPERATION ASSURED FROM FEDERAL AND STATE AUTHORITIES.

By ALBERT PHENIS.

Asheville, N. C., June 22.

Development and utilization of the water powers of the Southern Appalachian section, the states south of the Potomac and Ohio and east of the Mississippi rivers, is the object aimed at by the Water Power Conference, held here Tuesday, Wednesday and Thursday of this week, and now made a permanent organization. Government, state, corporation and individual co-operation was secured in this initial effort to bring about a thorough, complete and authentic survey of the field, and the adoption of the best, most feasible and effective means to secure the systematic and adequate development of water powers, great and small, and their use to the best advantage of the entire section.

Though not large in numbers it was a meeting of conspicuous importance in personnel. There were representatives of the Interior Department, the War Department, the U. S. Geological Survey, the Forestry Service, the Federal Power Commission, State Geological Surveys of various Southern states officials of power companies, hydraulic engineers, officials and representatives of Southern railroads, capitalists and private citizens, including a few farmers.

It had been wondered by some whether the meeting had in its inception or would have in its workings anything relating to the Ford offer to take over Muscle Shoals. While there is a tremendous sentiment, not only throughout the South but even all over the country, and particularly in the agricultural sections of the North and West, in favor of letting Ford begin at once the gigantic industrial development which he is declared to be ready to inaugurate the very moment his offer to Congress is accepted, it is a no less conspicuous fact that the water power companies, among numerous other interests, are opposing the Ford proposition by every means at their command.

Many engineers and others hold to the opinion, voiced by some Congressmen, that the terms of the Ford offer give him too much advantage in property and requirements, and maintain that the Government should finish Wilson dam and invite bids in the expectation of securing a much larger sum for governmental expenditures made at Muscle Shoals than the Ford offer would bring. With water power companies well represented at the meeting, presenting in literature and pictures, charts and maps, the advantages of such a development of the Appalachian water powers as would permit the tying in of all the present and prospective developments, on a superpower plan, to cover the entire section reaching from the Mississippi and the Gulf to the Ohio and the Atlantic, it was considered possible that something might develop in the speeches or resolutions that would at least get the matter before the convention. However, outside a brief indorsement of the Ford offer which Mayor Roberts injected into his welcoming address, and which reference was received in complete silence, there was no reference made throughout the conference to either Henry Ford or his proposition to take over Muscle Shoals.

Col. Joseph Hyde Pratt, director of the North Carolina Geological and Economic Survey, originated the idea of the conference, and in discussing the matter he told me that

he had from the beginning placed a ban on the question in controversy, and that the injunction had been strictly observed as laid down. He said:

"Muscle Shoals is a mere incident in the development of the water powers of the Southern Appalachian states. What is aimed at by this conference is to secure surveys of all the possible potential power sites, compile all the facts that have a bearing on their development and use, and thus be in a position to facilitate the greater and more expeditious growth of industry in the South Appalachian states. We aim to secure the co-operation of all Governmental, state and corporate or private agencies in this work, so that those who develop water powers, with the industrial activity that follows in their wake, may be encouraged to put forth their utmost endeavors to serve their sections. It is my hope that wherever laws properly regulating and taxing these companies may be enacted they shall be framed in a spirit of recognition of the benefits that have been conferred on the communities and sections in which the water power companies operate. In this way the states can encourage water power development instead of retarding it."

Dr. Pratt began work on the conference several months ago, after a long study of the lack of adequate, complete data on the water powers of North Carolina and the South Appalachian states generally. In the course of time he secured the co-operation of Government departments and officials and then the governors and the officials of the states. The resultant conference is felt to be a definite move forward. In the permanent organization effected, Dr. Pratt was made president. As the various national, state and corporate organizations represented are co-operating in the work, no separate organization, with high salaried officials and "plant," will be required, so the meager extra expenditures that may be necessary do not present a problem in finance, and the effective working of the organization and its committees is expected to begin at once and proceed continuously. The second meeting will be held next year, at a time and place to be fixed later on, but meantime various committee meetings will be held, early and with frequency.

Besides the program of speaking, which comprised a series of unusually thoughtful and practical addresses, there were a number of especially gracious social functions, including a reception at Biltmore, where Mrs. George Vanderbilt and her daughter Miss Cornelia received the visitors and their wives and daughters, and a banquet at the Grove Park Inn, at which a number of the distinguished visitors spoke briefly and happily, while yet not entirely departing from the theme of the conference—the desire through greater hydro-electric development to bring increased prosperity to this section of the South.

Without attempting a detailed or consecutive report of the proceedings, some of the outstanding features may be referred to in brief. Dr. Pratt, in outlining the scope of the conference, spoke of the necessity for reliance upon Governmental action in the utilization and conservation of water resources, because nearly every stream flows through more than one state and many of the water powers are on navigable rivers. Before an engineer can determine the productive value of water power he must have data as to stream flow, rainfall within the river basin, evaporation records, topographic maps, geological maps, and information regarding the rocks, forested areas of

the river basins, etc. The collection of this information is possible only through Federal co-operation.

At the present time there are many federal and state agencies collecting data and information of value to those interested in water power development, such as:

Federal—Interior Department: U. S. Geological Survey, Water Resources Division, Topographic Division; Agricultural Department: U. S. Forest Service, Weather Bureau; Department of Commerce: Coast and Geodetic Survey; War Department: Corps of Engineers, Air Service; Federal Power Commission.

State—Geological, economic and natural history surveys; Forestry departments, Conservation commission, Water Power commission, Corporations and Public Service commissions, Municipalities.

Private—Public utility and water power corporations, railway companies, industrial corporations with water power developments.

In order to make the information collected by these various agencies the most efficient and available there should be the closest co-operation between all of them in regard to making their information available to the others and to prevent duplication of work.

The potential water power resources of the Southern Appalachian states were given in tabulated form, also a description of the physiographic conditions of these states.

Summing up, Dr. Pratt disclosed that

"It is to the interest of all our people that our water powers shall be conserved and also utilized to their highest efficiency. The development and use of a water power is the one instance of the utilization of a raw material or natural resource that is replaced after the original has been consumed, without any effort on the part of man. The rains will continue to supply our streams with water."

"The demand for the commercial product of a water power development is so great that there is an efficient market for all that will or can be produced for years to come. Every horsepower produced by water power means that so much less coal or other fuel will be used, thus aiding in the conservation of our fuel supply, especially of coal."

"It seems to me that a more complete study or investigation should be made in regard to the feasibility of the electrification of many of our Southern railways, particularly those lines that traverse the Southern Appalachian mountains. I believe it is pretty well established that passenger and freight trains can be moved by electricity for considerably less than by coal. I believe it is also true that the maintenance of steam locomotives is nearly double that of electric locomotives ton for ton on drivers. It has been estimated that 50 to 40 per cent of a railroad's cargo space is absorbed in the transportation of coal. Of this coal carried on the railroads 7 per cent of it is consumed in its transportation. Wherever transportation of coal can be reduced it increases the efficiency of the railroad for general freight transportation. How often we find our railroads congested with transportation of coal—and any reduction of the amount of coal used by railroads or industries will reduce the chances of rail congestion. The development of water powers in the Southern Appalachian region, their conversion into electric power and the use of this electric power in electrification of railways and industries will also assist to conserve our coal supplies. When we realize that the use of bituminous coal has increased in the last 20 years from 100 million tons to nearly 600 million tons per year it makes us begin to consider seriously our future coal supply."

"I believe that the time has practically arrived when in certain sections of the Southern Appalachian states the power load is sufficiently large to justify the installation of an interconnecting line or perhaps even a superpower transmission line, into which may be fed electrical energy generated by high power, high economy hydro stations and steam stations, and from which power will be delivered to the consumer, either railroad or industry, with a reduction of from one-third to two-thirds the amount of coal now burned to produce steam power."

O. C. Merrill, executive secretary of the Federal Power Commission, who was chosen as presiding officer of the conference, pledged the co-operation of the Commission in the aims of the conference, in increasing through water power a volume of electrical energy sufficient to meet modern standards of comfort and convenience and the future requirements of industry and transportation. The growth of electrical

power from 2,000,000,000 kilowatt hours in 1907 to 44,000,000 in 1920 was mentioned, and the potentialities of the South Appalachian states were outlined. "The time is now here," he said, "when you should secure the necessary information and draw the plans for the fullest utilization of the resources you have. There are enough for generations to come, and in reliance upon them you should look forward to a degree of distribution and use of electric energy for domestic, agricultural, industrial and transportation purposes second to none in the United States."

Brief speeches were made on water resources, steam auxiliary plants; conservation of forested areas, etc.

N. C. Grover, chief hydraulic engineer, U. S. Geological Survey, said that with the necessity to compete with the cheap labor of Europe, the improvement of mechanical methods and the development of cheap power became imperative. The advantages which the Southern Appalachian states have in labor, climate and power must be retained by the development of greater power.

T. W. Norcross, chief engineer, U. S. Forest Service, criticized the wastefulness of the United States in denuding forest tracts, permitting erosion of lands and the filling of stream beds with silt.

Col. T. C. Williams, vice-president, Columbia Railway and Navigation Co., Columbia, S. C., made a plea for a square deal for power companies at the hands of the legislatures.

Prof. E. C. Ferris, dean of Engineering, University of Tennessee, declared that the proposition to put the steam power plants at the mouth of the coal mines is a dream, owing to the impossibility of securing there the large amount of water necessary for condensing purposes. He advocated the adoption of a superpower plan South, which would cover the territory between Washington and the Mississippi River, and declared that each state should concentrate its efforts to bring about the coordination of all the water with steam power plants of this entire section.

Discussing "What we have and what we need in topographic maps" Wilbur A. Nelson, state geologist of Tennessee, and Col. C. H. Birdseye, topographic engineer, U. S. Geological Survey, spoke of the necessity for co-operation by states, counties and municipalities, and W. S. Lee, vice-president and general manager of the Southern Power Co., declared that the importance of topographic maps is so apparent that Congress should make an appropriation sufficient to cover the entire United States. "They are useful to water powers, railroads, electric lines, and all who do anything in which the topography of the country figures. If the Government at the present time wants to move a body of troops it has to consult local maps. Everybody should join in and get a complete survey of the surface of the entire United States."

Maj. Harold C. Fiske, District Engineer, U. S. War Department, Chattanooga, Tenn., who gave early and efficient co-operation to Dr. Pratt in furthering the plans for the conference, outlined the work he has in hand in the Tennessee River basin. Studying the situation from the standpoint of water powers, industry and navigation, he has been urging the necessary Government aid that would enable his office to secure complete data and information affecting each feature of the proposed development of the Tennessee. The plan on which he is proceeding was presented as an example for the collection of basic information, through the co-operation of federal, state and private agencies, by which in time complete and accurate data applicable to any information requirement, would be available and at hand on the shortest notice. Maj. Fiske has given much study to the subject, and foresees not only a great and inevitable industrial development, through water power construction, for the Tennessee basin, but the possibility, by the building of impounding reservoirs on the upper waters of the Tennessee, of a large utiliz-

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ation of the Tennessee for navigation purposes as far up as Knoxville.

In making a survey of the basin, Maj. Fiske's office has worked out an original system of mapping by aerial photography. Gerald H. Matthes, in charge of the work, detailed the results of this new departure from conventional methods, in an address on "Airplane photography as an aid to plain table surveys in topographic mapping."

Under the general topic, "the utilization of power, the industrial future, the South and its relation to development of water powers," Lincoln Green, vice-president of the Southern Railway, declared that his railroad "is in hearty sympathy with everything tending to the development of the section." Continuing he said:

"The Southern has had a keen interest in hydro-electric development from the time of its inception, notwithstanding some others had felt that it ought not to be encouraged. Industry and hydro-electric power go hand in hand. No people can become commercially great who market only their raw material. It is no longer proper to ship cotton away and buy back the manufactured article, whereby the manufacturer is paid back all that he had paid out for the raw material. The South is now making articles ready to wear, with an increasing expansion in volume and variety. I take off my hat to the people of the South, who not only make things for their own use, but are now sending them to other sections and abroad."

"In the matter of iron and steel, when Gen. Wilder said he could make iron in the South at \$13 a ton he was laughed at. He did make it for \$6. It is very gratifying that we are now making and exporting iron and steel products to all parts of the world. On the Southern Railway alone recent shipments went out to 14 different countries."

"In Chattanooga there was recently installed the largest industry in the world for making bathtubs, utilizing the latest electrical methods, and turning out bathtubs that come from the electric furnace."

"I believe we are just in the beginning of industrial development South, and that hydro-electric systems are most important in this work. Great as has been the industrial expansion of the past twenty years, I believe it is merely the beginning of what we may expect to occur in the next twenty years."

J. C. Williams, manager development service, Southern Railway, also speaking on Southern development, contrasted conditions in the cotton industry South and in New England, and quoted from a recent speech by Robert Amory, president of the National Association of Cotton Manufacturers, in which he said, "The record is clear enough, the cotton industry is gradually slipping away. Many well posted manufacturers have gravely considered and state that it is folly to enlarge Massachusetts cotton mills; it is better to go (to the Piedmont section of North and South Carolina) where industry is wanted and encouraged."

The growth of the cotton mill industry South as compared with New England was referred to, and it was suggested that every one urge the development of the cotton textile machinery industry in the South, instead of continuing to buy such machinery North.

"Outside of water power, coal can be delivered at many points South cheaper than either coal or oil in New England."

Referring to present activities, Mr. Williams said:

"Coal is now being mined again near Richmond, where the first mining on a commercial basis in this country was done, while efforts are being made to develop new mines in the Cumnock field of North Carolina."

"A new porcelain industry is being established in Knoxville. Ground will be broken shortly, and it is believed the new plant will be so successful that others will come, and a new industry be added to the South."

"A 20,000 horsepower inquiry, which was under consideration but dropped during the depression, has resumed negotiation."

"Hydro-electric power is needed in the South for electric furnace work. The brown ores around Murphy are of

greater extent than heretofore known, and should receive the benefit of electric treatment."

"Zinc oxide is also another product the South should manufacture."

"The development of the South is assured, but the rate of development depends on ourselves, and it can be retarded by bad laws."

"Publicity is a factor which must be employed. We must let the people everywhere know what we have—what blessings we enjoy in water power, raw materials, climate, and all."

Resolutions definitely stating the purposes of the undertaking were presented by the committee in charge, and were unanimously adopted, as were recommendations for officers for the first year, as follows:

President, Dr. Joseph Hyde Pratt; vice-president, Lincoln Green; secretary, J. A. Switzer; assistant secretary and treasurer, Thorndyke Saville.

Reduced Rates by Mallory Line on Iron and Steel Products from Pittsburgh and New York.

Galveston, Texas, June 22—[Special.]—Sweeping reductions of the steamship rates on iron and steel products from New York and Pittsburgh to Galveston and Houston, effective July 1, are announced by the Mallory Line. On iron and steel articles, including billets, forgings and various other finished articles, the new rate to Galveston from New York will be 30 cents per 100 as against the present rate of 36½ cents, and to Houston 36 cents against the present rate of 42 cents.

On structural steel, unfabricated, new rates will be 32 cents to Galveston and 37 cents to Houston against present rates of 46 and 51½ cents.

On structural steel, fabricated, rates will be 36 cents to Galveston and 41 cents to Houston, against present rates of 52 and 57½ cents.

On cast iron pipe, couplings, connections, etc., new rates will be 30 cents to Galveston and 35 cents to Houston, compared with present rates of 36 and 42 cents.

On iron and steel pipe, exclusive of cast iron pipe, new rates are 30 and 35 cents, compared with present rates of 36½ and 42 cents.

On tanks and tank material, and bar iron over 40 feet in length, new rates are 32 and 37 cents, against present rates of 46 and 51½ cents.

Rates from Pittsburgh territory to Galveston and Houston are to be two cents under the New York rates for same class of freight.

Ninety-two Carloads of Tomatoes Loaded in One Day for the North—Breaks 30 Year Record.

Crystal Springs, Miss., June 20—[Special.]—All records for thirty years in this truck section were broken here this week when 92 solid carloads of tomatoes were loaded in one day for Northern markets, containing approximately 90,000 crates. It is believed that ten more cars could have been filled but for a shortage of crates, three local factories running to the limit of capacity not being quite able to supply the rush demand. Growers received \$1.00 per crate. The season has been very successful, bringing in millions in wealth. 342 cars is the total for the week.

F. X. Schwarzenbek and J. S. Ross, of the Bartlesville, Okla., station of the Bureau of Mines, have gathered data for an engineering report on the Slick oil field in that state. A study of the structural conditions of the field has thrown light on some of the probable sources of water interfering with a number of operations.

June 29, 1922

THE AMERICAN ROLLING MILL CO.**MIDDLETOWN, OHIO**

GEORGE M. VERITY
PRESIDENT



June 10, 1922

Mr. Richard H. Edmonds
Editor, Manufacturers Record
Baltimore, Maryland

Dear Mr. Edmonds:

I wish to congratulate you on the pamphlet which Manufacturers Record has just brought out on "The Prohibition Question" as viewed from the economic and moral standpoint, covering the answers which you received to your questionnaire sent to men in all walks of life throughout the country.

The practical answers which you have received from professional and business men giving account of their actual observation and experience in connection with this great movement are unquestionably of very great benefit, as they will tend to clear the atmosphere which has been much clouded by propaganda intended to belittle the result of this great movement.

There has unquestionably been much cause for doubt in the minds of many people as regards the real result of the so-called prohibition law, as there have been many unexpected and regrettable reactions.

The imposing collection of statements and experiences which you have published is worth the reading of every business man. We, ourselves, are so impressed with it that we are sending for five hundred copies for general distribution. No doubt other business men will want to do the same thing.

I again congratulate you on your good work.

With kind regards, I remain

Yours very truly

President

The first edition having been exhausted, we have just printed a second edition with 16 additional pages, (making a total of 100 pages), mainly devoted to letters from railroad presidents telling of the beneficial influence of the prohibition of intoxicating beverages upon railroad employees. These letters from railroad officials are an invaluable addition to the discussion of Prohibition as an economic factor in the nation's business life.

The price of this pamphlet "The Prohibition Question" is 50 cents a copy, or for bulk orders of 50 copies or more 40 cents, 100 copies 35 cents each, 1000 copies or over 30 cents each.

We invite your order for any number from one copy to hundreds or thousands.

\$100,000,000 Being Expended Upon School Buildings and Equipment in South.

With about \$100,000,000 involved in the erection and the equipment of school buildings in the South recently begun, now under way, or announced for construction in the near future, the South is giving an evidence not only of its increasing wealth, but of the increasing activity in the broadening of its educational facilities.

In 1920, the South expended over \$204,225,000 on public school education which is only \$10,700,000 less than the United States expended on public school education in 1900, and it was \$24,000,000 more than the total spent for public education as late as 1900, by the entire country outside of the South. In 1900, the United States, with a population of 75,904,000, spent on public schools \$214,964,000, or an average per capita of \$2.83. In 1920, the South, with a population of 36,306,000 spent \$204,225,000, or an average per capita of \$5.62 on public schools.

During the nine months from September, 1921, to the end of May, 1922, the MANUFACTURERS RECORD has reported school buildings in the South under construction or contracted for, amounting without equipment to about \$90,000,000, and including in this list no building costing less than \$10,000. If to this total be added the hundreds of schools in country districts costing less than \$10,000 each and the many millions involved in the equipment of the schools it is conservative to estimate a total of at least \$100,000,000 for school building activities during the nine months covered in this survey.

Great, however, as are the expenditures for schools, colleges and universities, what is being done in this line is only indicative of a similar degree of activity in the erection of hospitals, bank and office buildings, and dwelling houses.

A few weeks ago we reported that during eight months church building activities in the South represented an actual outlay of over \$25,000,000. This was regarded as indicative of the South's increasing wealth and increasing expenditures for religious work. The money invested in church buildings comes from the voluntary gifts of those directly interested in religious work. The vast expenditures for the erection of school buildings comes from the general public and mainly through the issuing of bonds.

In addition to the school buildings as reported there have been many bond issues already voted and aggregating some millions of dollars to provide for the erection of a large number of schools many of which are not included in the foregoing figures because the plans have not progressed sufficiently for publication. Hence, large as the total is, it does not tell the whole story for there are many school, college, and university structures for which plans are being made and which will be under contract before the end of the year but which are not counted in this survey. Moreover, many school buildings completed in the summer of 1921 are

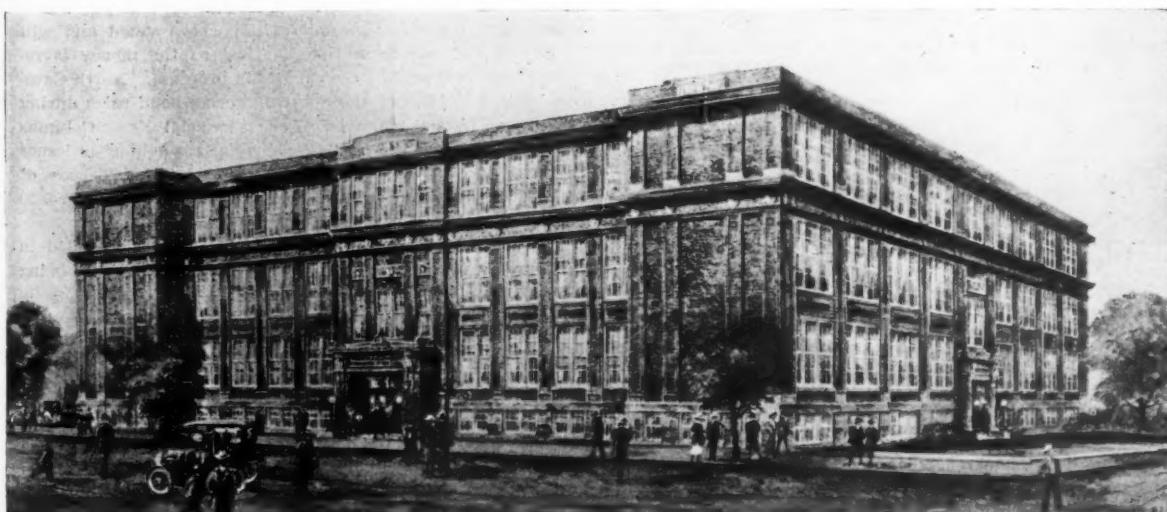


PRINCETON HIGH SCHOOL, PRINCETON, W. VA. WYSONG & JONES, ARCHITECTS.

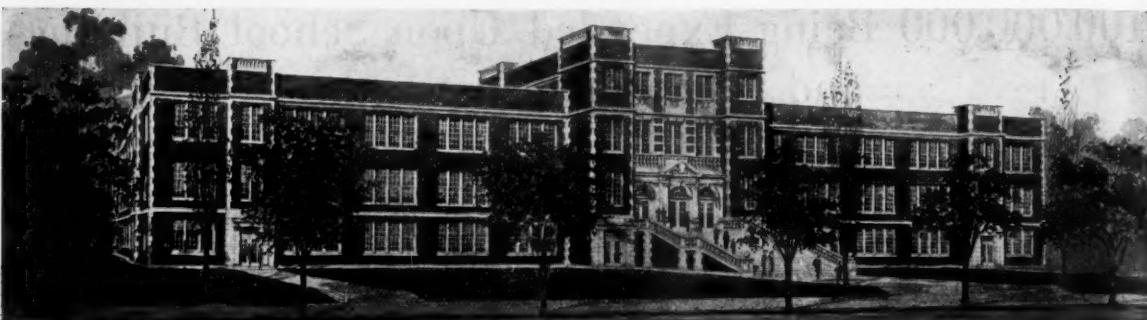
not included, for these figures cover only the structures definitely begun or completed since September last.

A number of the college and university structures are so costly and of such an elaborate type that they have been in course of construction for 18 months or more; even some of the public school buildings are of this nature. A great many of the larger structures now being built are but a part of the ultimate group planned, and in some instances it may be years before the entire project is brought finally to completion.

Of the buildings now under construction many are beautiful and impressive in design, and striking because of their very simplicity. The newest ideas in equipment and facilities are embodied in their construction. Several of the grade school and high school buildings will each involve an ex-



GEORGE WYTHE HIGH SCHOOL, RICHMOND, VA., COST \$400,000. CHAS. M. ROBINSON, ARCHITECT. A. M. WALKUP COMPANY, CONTRACTORS.



WYATT HIGH SCHOOL, CHATTANOOGA, TENN. COST \$500,000. ARCHITECTS, R. H. HUNT CO., CHATTANOOGA AND DALLAS, TEXAS.

penditure of \$1,500,000 or more. Many of the finer structures are of steel and reinforced concrete frames, finished in brick, stone, stucco, terra cotta, or limestone, and with slate, tile and copper roofs much in evidence. The interior finish is in keeping with the general architectural treatment of the exterior. Cement and composition floors, with steel tread stairs prevail. Provision for manual training, domestic science, gymnasium and recreational features as well as for baths is a feature. In fact the majority of these structures represent the very best experience in school design and equipment.

A summary of school building in the South during the past nine months of structures costing \$10,000 or over, as compiled by the MANUFACTURERS RECORD is as follows:

SUMMARY OF SCHOOL BUILDING IN THE SOUTH FOR NINE MONTHS FROM SEPTEMBER, 1921, TO END OF MAY, 1922.

State.	Number of Buildings.	Total Cost.
Alabama	38	\$3,144,750
Arkansas	9	307,500
Georgia	41	9,968,715
Florida	35	2,966,400
Washington, D. C.	13	4,608,429
Kentucky	36	2,773,711
Louisiana	37	3,836,690
Maryland	24	9,216,000
Mississippi	29	1,726,300
Missouri	60	10,141,800
North Carolina	107	11,998,453
Oklahoma	40	5,362,480
South Carolina	47	2,128,730
Tennessee	49	3,349,632
Texas	113	10,916,450
Virginia	48	4,124,837
West Virginia	40	2,815,400
Total	766	\$88,496,277

NUMBER AND PAR VALUE OF SCHOOL BOND ISSUES SOLD IN SOUTH FOR FIRST FIVE MONTHS OF 1922.

State.	Number.	Value.
Alabama	5	\$865,000
Arkansas	7	273,000
Florida	11	1,284,000
Georgia	9	4,738,500
Kentucky	8	1,382,000
Louisiana	11	1,615,000
Maryland	2	415,000
Mississippi	10	439,000
Missouri	6	636,000
North Carolina	42	9,043,000
Oklahoma	9	1,665,000
South Carolina	10	1,051,000
Tennessee	10	1,010,000
Texas	50	4,156,500
Virginia	7	637,000
West Virginia	6	438,000
Total	203	\$29,651,600

The figures on the number and cost of the school building here reported begin with September last and include the month of May. They are based upon reports from architects, contractors and school officials throughout the sixteen Southern states and the District of Columbia, and give a clear indication of the advancing wealth of the South and the higher standards demanded in educational work and in the equipment required to put these finer ideals into practical form.

In addition to the activities covered in this summary there are now in the hands of architects tentative plans that will be released for bids in the near future. This will permit construction to get well started before late fall and winter. Every mail brings to this office many letters of contemplated school buildings, as well as of additional contracts let, and indications are that the progress now being made is but an illustration of the still greater activity that may be expected in this and in allied lines of municipal, state and private endeavor in the near future.

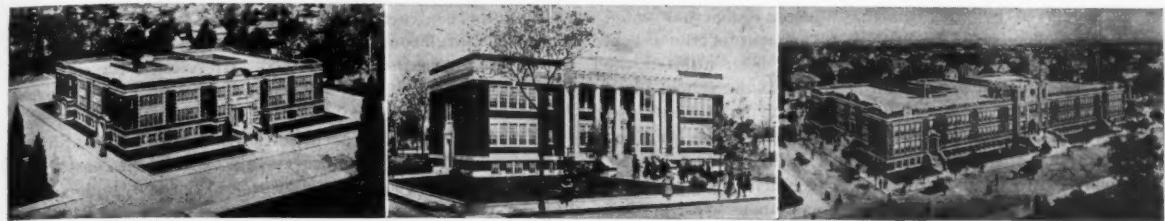
North Carolina stands first in the list of states considering the valuation of school building work, a total of \$11,998,453 representing the cost of 107 school buildings covered by the survey. In Missouri the cost of 60 school, college and university projects reported is \$10,141,800, while in Texas the construction of 113 structures aggregating an expenditure of \$10,916,450 was announced during the nine months period. In Georgia the cost of 41 structures covered is \$9,968,715. Maryland with a total of approximately 37 buildings to cost \$9,200,000, and Oklahoma with plans announced for completion of 40 structures that will ultimately cost \$5,362,480 stand next in order.

There is pronounced activity of this character in practically every part of the South, with indications of marked improvement for those states where school building has not yet been undertaken on a big scale.

These figures on work actually under way and contemplated for future construction are strikingly borne out by the bond sales South during the past five months. In addition to bonds actually sold scores of other issues with par values amounting to millions of dollars have been voted and will be offered for sale from time to time as the money is required for fulfillment of the expansion program. North Carolina leads all states of the South in school bond sales during 1922, there having appeared in the Financial News Columns of the MANUFACTURERS RECORD reports of the sale of 42 issues aggregating \$9,043,000. Georgia with sale of 9 issues of \$4,738,500 par value stands second, with Texas sales of 50 issues of \$4,156,500 par value third.

The average cost of the 766 school structures included in this summary is approximately \$115,700, the aggregate being \$88,496,277.

Of the 107 school projects in North Carolina, above \$10,000 in cost, 37 buildings cost \$100,000 each and over. Asheville, Charlotte, Fayetteville, Greensboro, Raleigh, Winston-Salem, and High Point have programs of especial interest. Palmer-Spivey Construction Co., of Augusta, Ga., are the contractors for the Central High School at Charlotte, costing \$242,000 after plans by Lockwood, Greene & Co., architects, of that city and Boston. C. C. Hook, Charlotte, is the architect for a \$125,000 vocational school being built in Charlotte by the Northeastern Construction Co. At Elizabeth City a normal and industrial school for the colored



TYPICAL NORTH CAROLINA SCHOOL BUILDINGS AT FARMVILLE, EDENTON, AND RALEIGH.
ARCHITECT, C. GADSDEN SAYRE. ANDERSON, S. C.

is under way by J. J. Strand, Southern Pines, after plans by James A. Salter, and costing \$175,000. Plans have been completed by Milburn, Heister & Co., Washington architects, for two schools with 35 class rooms each at Elizabeth City to cost \$350,000. The same architects also are engaged on the Fayetteville High School costing \$250,000. At Fayetteville, the Brown-Harry Co., Gastonia, is erecting a \$158,000 building, with William G. Rogers, of Charlotte, and Stiles S. Dixon, of Fayetteville, as architects. White, Streeter & Chamberlain, architects, Gastonia, have under their supervision the Gastonia High School which without equipment will cost \$350,000; it is 258 feet by 175 feet, three stories with basement, and contains a gymnasium, natatorium, auditorium, manual training and domestic science departments, laboratories, etc. Bennett's College, Greensboro, is having a \$100,000 dormitory and dining hall built at a cost of over \$100,000 by Hunt and Sadler, of that city, after plans by Harry Barton.

The North Carolina College for Women at Greensboro has a program for work to cost over \$500,000 and the work is now nearing completion; it provides for three dormitories costing \$406,000 and an additional wing to the science hall being erected by J. A. Jones Construction Co., Charlotte; a \$75,000 addition to the Library by J. L. Crouse, of Greensboro, and a \$25,000 economics building by L. A. Jackson, Greensboro. Harry Barton is the architect for each of the structures.

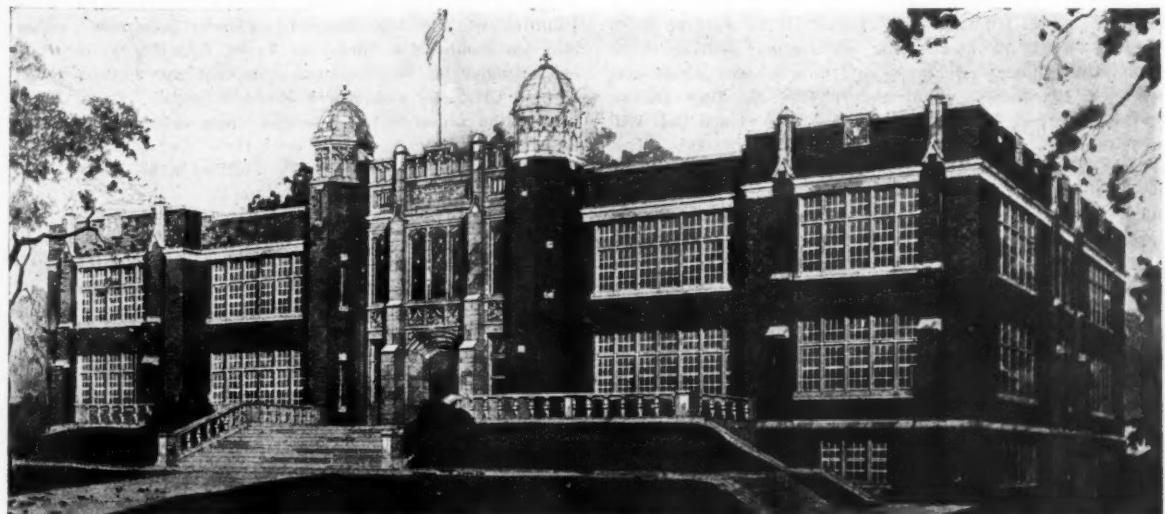
At Lenoir, N. C. a \$125,000 structure is being built by J. W. Stout & Co. with Benton & Benton as the architects. C. Gadsden Sayre, Raleigh and Anderson, S. C., is the architect for a \$500,000 high school and two elementary schools at Raleigh, costing \$100,000 and \$135,000 each, as well as for a Colored Junior Industrial High School to cost \$140,000 for

the same city. Repairs and additions will be made also to four schools at a cost of \$110,000.

James A. Salter of Raleigh, is the architect and the Carolina Construction Co., of Raleigh and Hamlet, the contractors, for the State School for Blind being erected at Raleigh at a cost of approximately \$350,000. The work consists of six fireproof buildings and one-half mile of brick and concrete service tunnel. There are three dormitories, the superintendent's building, one auditorium and one combination power house, laundry and pump house. The roofs are all of tile and the floors of clear oak, cork and ceramic tile. Likewise work is proceeding steadily on the improvements to the North Carolina State College of Agriculture at Raleigh under the direction of Nelson & Cooper, architects and W. B. Banon, contractor.

At Washington, N. C., \$300,000 will be expended for school buildings after plans by Benton & Benton, architects, of Wilson. In the latter city a \$200,000 high school building is under way; C. C. Wilson, Columbia, S. C., is the architect and W. P. Rose, Goldsboro, N. C., the contractor; it is a three story brick, frame and reinforced concrete building 100 by 350 feet. Jones Bros. & Co., High Point, have the contract for three buildings to cost approximately \$30,000 each in the same town, C. C. Wilson being the architect.

A unit of The Richard J. Reynolds High School now under construction at Winston-Salem will cost \$450,000 with approximately \$1,500,000 as the cost of the entire project. Chas. Barton Keen, 1218 Chestnut St., Philadelphia, is the architect, and the Du Pont Engineering Co., Wilmington, Del., are the contractors. The unit now building is a standard reinforced concrete structure, three stories high, with limestone trim and Colonial face brick finish, being 268 by 152



CLAIBORNE PUBLIC SCHOOL, SHREVEPORT, LA. COST \$150,000 WITHOUT EQUIPMENT. ARCHITECT, EDWARD F. NEILD, CONTRACTOR, BRASHEARS CONSTRUCTION CO., BOTH SHREVEPORT.

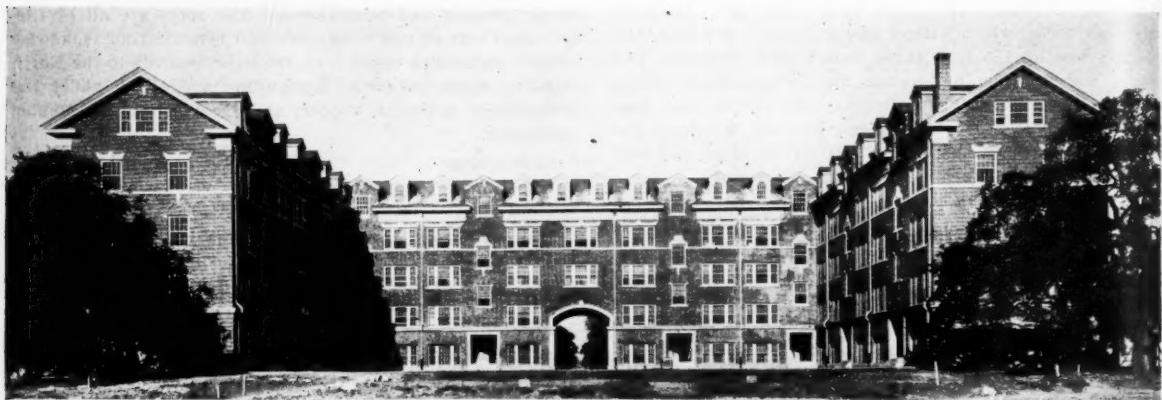
feet. A separate power house, 200 feet from the main building, is connected by pipe tunnel. Winston-Salem has voted \$1,800,000 in bonds for immediate betterment of the school system and of this amount \$700,000 has been allotted the Reynolds high school group. In addition to the school plant a site covering 30 acres and an auditorium building to cost \$250,000, will be features of the development. The auditorium and site are the gift of Mrs. Catherine Reynolds Johnston, as a memorial to R. J. Reynolds. A technical high school to cost \$700,000 is also planned. A gymnasium is to be erected in Hanes Park with play grounds immediately adjacent. The \$1,100,000 balance of the issue will be used to construct five white and three colored schools. All of these are planned with a view to making additions in the future. During this year and next approximately \$2,300,000 will be expended for school development in Winston-Salem, the general plan being handled by Dr. Strayer and Dr. Englehart, of Columbia University, Chas. M. Crawford is superintendent of building construction for the city.

On 113 school structures in Texas involving the ultimate expenditure of more than \$10,000,000, 32 will cost above

with John Tulloch, Sherman, architect. Walter White, Greenville, is the contractor for the Sulphur Springs high school for which Barglebaugh & Whitson, Dallas, are the architects; the cost is approximately \$150,000. Giesecke & Harris, architects, Austin, have completed plans for the Taylor, Texas, high school, costing \$130,000.

M. W. Scott & Co., architects, Waco, are engaged upon plans for buildings and improvements estimated to cost \$400,000, including schools as follows: A 22-room junior high, 10-room ward, 12-room negro, 12-room, and two additions of five and four rooms each.

Missouri school construction is represented by 60 projects that will mean an ultimate investment exceeding \$10,000,000 and of this number 27 will cost from \$100,000 to \$1,675,000 each; 37 will cost at least \$50,000 each. The Southeast Missouri State Teachers College is having a three story fireproof building containing 35 rooms and an auditorium seating 500 erected by the J. W. Gerhardt Construction Co., Cape Girardeau, at a cost of \$125,000, with Study & Farrar, Arcade Bldg., St. Louis, as the architects. Davis & Phillips, Columbia, have the contract for a \$100,000 science hall at Stephens



BOY'S DORMITORY, BAYLOR UNIVERSITY, WACO, TEXAS. BIRCH D. FASTERWOOD, ARCHITECT.

\$100,000 each, while 70 will cost \$50,000 each and over; work is under way in 74 separate cities and towns in every section of the big state. Parker & Rittenberry, are the architects and Fred. Brane Construction Co., the contractors for a high school at Amarillo estimated to cost \$200,000. Beaumont will have a similar building costing \$200,000 after plans by R. H. Hunt Co., of Dallas. It is a three story structure with 32 rooms, an auditorium seating 1200, a full size gymnasium, and a cafeteria to seat about 400. DeWitt & Lemon, 806 Southwestern Life Building, Dallas, are the architects for the Stephen F. Austin school that will necessitate the expenditure of upwards of \$150,000. Trost & Trost, El Paso, architects, are working on plans for the Foretto College group of three buildings, including the convent, chapel and academy, estimated to cost \$500,000. V. E. Ware, contractor, is engaged upon the school at Five Points, costing \$122,000, after plans by Trost & Trost. In addition to the new structures extensive and costly additions and improvements are being made to the present school buildings in El Paso, a \$500,000 bond issue being available, according to R. R. Jones, assistant secretary to the School Board. Henger & Chambers, contractors, of Dallas, are building a \$145,000 high school at Fort Worth, of which Clarkson & Gaines, of that city are the architects. At Gainesville a \$150,000 high school is under construction by the J. E. Johnson Construction Co., Waco, with Wm. Albert Jackett, Sherman, architect.

Greenville plans to spend \$150,000 for a new high school. At Ranger more than \$150,000 is being expended for a high school, the contractors being Henger & Chambers, Dallas,

College, Columbia, of which Jamieson & Spearl, St. Louis, are the architects. It will be a 3-story brick structure with limestone trimmings, housing class rooms, laboratories and lecture rooms.

A total of more than \$400,000 is being expended for a Women's Building, an Agricultural Building, and a Chemical Building at the University of Missouri, Columbia, after plans by Jamieson & Spearl, St. Louis. Among the contractors engaged on the various structures are Collins Bros., Kansas City, Mo. and Murch Bros., St. Louis. Other buildings in the group include medical, engineering, power house and hospital units, involving with those now under contract the expenditure of \$960,000. In addition a \$75,000 building will be erected by the city of Columbia.

At Kansas City the Patti-Moore Co., Okmulgee, Okla., have under construction a \$175,000 building after plans by Chas. A. Smith, Kansas City, Mo., architect. Likewise a \$160,000 building is under contract to Arthur G. Harper, Kansas City, with Chas. A. Smith, of the same city, as architect. Collins Bros., contractors, have practically completed the Woodland School which will cost over \$500,000, the architect being Chas. A. Smith. It consists of a three story fireproof structure with all outside class rooms, tile roof, Italian architecture, and red matt face brick with terra cotta and cut stone trim. The Crosby-Elmer Construction Co. is making good progress on the \$250,000 Troost School. In addition costly improvements and additions are being made to established schools. Sedalia, Mo. plans the erecting of a \$400,000 junior high school.

At St. Louis University a high school to cost complete \$500,-

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000 will be erected after plans by Barnett-Haynes-Barnett, architects, and will have accommodations for 1200 students. A \$275,000 elementary school is in course of planning by R. M. Milligan, also a \$1,675,000 high school at Vandeventer and Natural Bridge Avenues and another costing \$1,675,000 on Wagner Playground. Likewise a \$300,000 elementary school will be erected at Morgan Ford Road, St. Louis.

Warrensburg, Mo. will have a \$150,000 addition to the Central Missouri State Teachers' College, with a seating capacity of 1830. Samuel M. Hitt, is the architect and plans call for a brick, concrete and stone building, with a cafeteria in the basement. The same architect is engaged on a school at the Girls' Industrial Home at Chillicothe.

Maryland's school building program for the period of this survey shows a total of approximately \$9,200,000. This sum, however, takes into consideration only a part of the school bond loan of \$10,000,000 which the city of Baltimore has available for new buildings and repairs to existing structures. Some of this Baltimore City work was completed last fall, the construction including 3 schools costing \$345,000, \$450,000 and \$475,000 each respectively, while a large part of the construction provided by the loan will be carried over into 1923. The sum available for repairs from this loan is \$1,000,000 for this year to which should be added about \$650,000 available from the city tax receipts. Architects at work on plans for 7 additional schools for the city report good progress, and it is understood that bids will be requested soon on several of these structures. In addition to the foregoing improvements actually under way or contemplated, there is proposed for the city a \$15,000,000 school bond issue, and a campaign in its behalf is now under way. At Johns Hopkins University a new dormitory will be built at a cost of over \$300,000 and other units will be built.

At Westminster, Md., extensive improvements are being made to the Western Maryland College. Additions costing \$250,000 are under way at Hood College, Frederick, Lloyd C. Culler being the contractor, and Hamme & Witman, York, Pa., the architects. The new structure is 206 by 48 feet wide, four stories high and with a two story kitchen and servants quarters in the rear. The work at Westminster is under the direction of the Southern Steel Construction Co., Baltimore, with Chas. M. Anderson as architect.

Georgia with a large number of projects just completed, now under way or planned for immediate future construction has a program aggregating close to \$10,000,000, with activity of this character well scattered through the state. In Atlanta \$4,000,000 will be expended for a boys' senior high school, girls' senior high, south junior high, northwest junior high, colored junior and senior high, eight white elementary schools and four colored elementary schools. A.

Ten Eyck Brown, of Atlanta, is the supervising architect. At Montezuma a \$100,000 structure has about been completed by the Pittman Construction Co., of Atlanta, with W. J. J. Chase, of that city as architect. It contains 16 class rooms, 3 domestic science rooms, 3 general science rooms, 2 libraries, teacher's rest room, superintendent's office, an auditorium with a seating capacity of 800, etc. Valdosta has a \$150,000 building under construction by Palmer-Spivey Co., under plans by G. Lloyd Preacher & Co.

With plans announced during the last nine months for 40 school projects Oklahoma has under way a program totaling over \$5,300,000. Plans for two junior high schools at a cost of \$250,000 in Enid are in the hands of R. W. Shaw. At

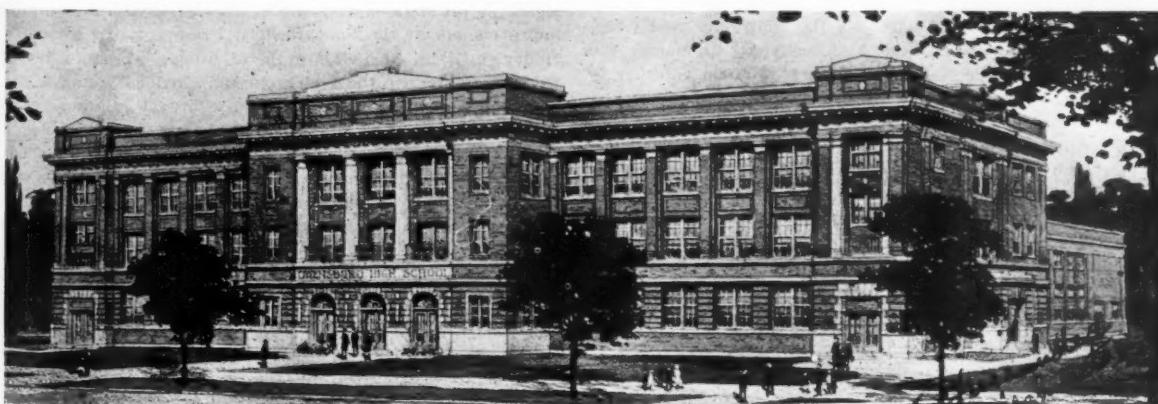


FRANCIS SCOTT KEY SCHOOL ERECTED IN SOUTH BALTIMORE AT COST OF \$450,000.

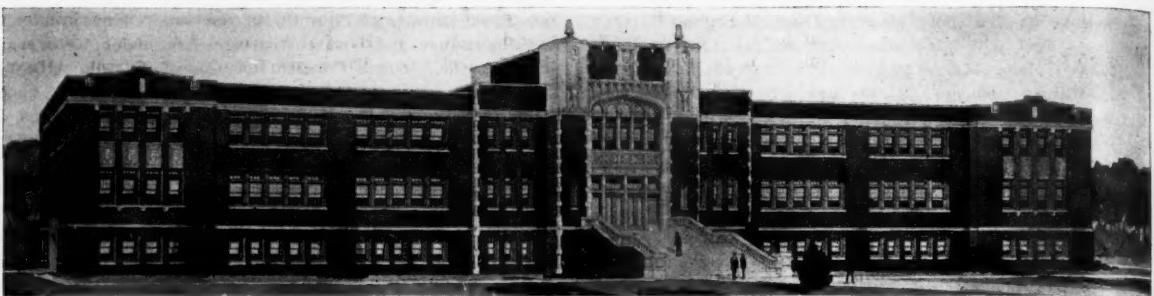
Lawton the erection of a \$160,000 high school is contemplated. The Manhattan Construction Co. has the contract for additions costing \$136,700 to Muskogee schools, the architect being H. O. Veleur & Co. Sapulpa intends building a \$125,000 junior high school, a \$225,000 bond issue having been recently authorized.

At Tulsa the construction of a \$1,000,000 Central High School is under way by J. W. Van Horn, contractor, plans having been prepared by Geo. Winkler, architect. With the old building this forms a unit 260 feet square, with basement, ground floor and three floors above. The improvements consist of basement, boys' gymnasium and bleachers, girls' gymnasium, improvements to boiler and machine and fan rooms; ground floor—pool, drill rooms, shower and locker rooms, printing room; second floor—class rooms and balcony, band rooms; third floor—class rooms, cafeteria, kitchen, etc. In all there are 56 class rooms.

Washington, D. C. has a big building program that will total perhaps \$4,600,000. Lake & McCray have the contract, and Lt. Col. P. M. Anderson is the architect, for a \$300,000



OWENSBORO HIGH SCHOOL, OWENSBORO, KY. COST \$250,000. ARCHITECT, A. F. HUSSANDER, CHICAGO.



SOUTH PARK HIGH SCHOOL, BEAUMONT, TEXAS. COST \$250,000. ARCHITECTS, R. H. HUNT CO., CHATTANOOGA, TENN., AND DALLAS, TEXAS.

laboratory building begun by the United States Government and to be completed for University purposes. The H. D. Watts Co., of Baltimore and Washington, have the contract for School No. 183, costing \$120,500; Upman & Adams, Washington, are the architects. The Wheatley School is being erected at a cost of \$206,194 by Parsons & Hyman with A. P. Clark as architect. The Eastern High School, estimated to cost \$959,700, is now more than 50 per cent complete, the contractor being George W. Wyne; plans by the municipal architects. M. Seretto is engaged in erecting School No. 178 after plans by McNaughton & Robinson, Boston, Mass., and estimated to cost \$125,000. The same contractor is at work upon the Eaton School with Arthur N. Heaton, as architect; it will cost approximately \$140,000. Albert Harris, municipal architect, has plans for two junior high schools, costing \$300,000 each.

Buildings for educational facilities in Virginia as announced during the past nine months number 48 costing approximately \$4,125,000. Work is being rushed on Blackstone College for Girls; R. F. Rice of Petersburg, is contractor with F. A. Bishop, of the same city, architect. It will involve the expenditure of more than \$300,000. At Lexington a \$150,000 chemical laboratory will be built for Washington & Lee University, with Flounroy & Flounroy, of Washington, architects. A colored high school at Lynchburg, for which the contract was let to W. Y. Jones will cost \$105,000, the architects being Craighill & Cardwell. At the Randolph Macon Woman's College the Smith Memorial Building is nearing completion at a cost of \$175,000. Jno. P. Pettyjohn & Co., Lynchburg, is the contractor and S. S. Johnson, the architect. The new building consists of a dining hall with a seating capacity of 600, and an auditorium for 1200, in addition to all the necessary rooms and quarters for student activities. Norfolk has a big school building program, a large amount of the work having been started in the summer and early fall of last year.

The Woodrow Wilson High School at Portsmouth will cost \$115,000. E. C. Ford, Norfolk, is the contractor and Chas. M. Robinson, Richmond, the architect. At Richmond the Graham Construction Co. is building a \$100,000 addition to Maury School after plans by the same architect. James Fox & Sons were contractors for the \$110,000 grade school in Forest Hill, now nearly completed. Contract for the \$400,000 junior high building was let to A. M. Walkup Co., and the work is progressing rapidly. Chas. M. Robinson is the architect for the structure, which contains 35 class rooms, principal's office, library, lunch room, gymnasium, locker rooms, administration offices, etc. The structure is 170 by 142 feet, three stories high and basement.

Suffolk's new school building is under contract to J. C. Curtis of Denbigh, with Chas. M. Robinson as architect.

With 37 buildings included in its program Louisiana has plans already announced for expending over \$3,800,000 in work of this character. I. T. Davis, Monroe, is the contractor

for the Faulk school to cost \$110,000 and Frank Masling for the Tucker school costing \$125,000 also at Monroe. J. W. Smith is the architect for both of these structures. Caldwell Bros., New Orleans, have the contract for the New Iberia high school involving the expenditure of over \$100,000. An annex to the Gayarre School, New Orleans, is being erected by Doulout & Williams Co., Inc., at a cost of \$112,000; E. A. Christy is the architect. The Catholic Diocesan Seminary is making improvements totaling \$575,000; Jos. Fromherz, has the general contract, with Allison Owen, architect. Two elementary schools are being built by the O. M. Gwin Construction Co., with plans by the city architect, at an estimated cost of \$210,000. Plans are under way for additional buildings to meet the city's needs, and contracts will be let in the near future.

A public school at Rayville under contract to the Brashears Construction Co., will cost \$125,000. Edward F. Neild, Shreveport, is the architect. A similar structure at Shreveport is being erected by the same contractors and under the supervision of the same architects at a cost of \$150,000.

A county high school at Ville Platte for which Knapp & East, Lake Charles, are the contractors and Favrot & Livaudais, New Orleans, the architects, is nearing completion at a cost of about \$100,000.

Tennessee with 49 projects of this character at a cost of over \$3,350,000 is going rapidly forward with its program. At Cookeville a \$100,000 building for the Tennessee Polytechnic Institute is under contract to the Advance Contracting Co., Nashville, with Daugherty & Gardner of that city as architects. Five buildings to cost \$500,000 are planned for Jackson at Laberth College, the first unit to be erected shortly at a cost of \$100,000 with R. A. Heavner, architect. The Janes Construction Co., Johnson City, has the contract for a \$150,000 building at the East Tennessee Normal school, for which R. H. Hunt & Co., Dallas, is the architect.

Elaborate plans are in course of preparation which will mean the ultimate expenditure of over \$1,000,000 for building improvements at the Southwestern Presbyterian University; Henry C. Hibbs, Nashville, is the architect. Mahan & Broadwell, Memphis, are the architects and Fred B. Young & Son, have the contract for erection of a \$150,000 building at the West Tennessee Normal school. Contract has been let to G. B. Howard, Nashville, for a building at the Middle Tennessee Normal school at Murfreesboro, to cost \$150,000, with Henry C. Hibbs, Nashville, as architect.

At Nashville work is progressing on improvements and auditions to the A. & I. Negro Normal school at a cost of \$150,000. The Advance Contracting Co., Nashville are the contractors with Marr and Holman, architects.

Alabama's program calls for completion of 38 structures valued at \$3,144,750. At Anniston a four story building, costing \$100,000 is under way at the Barber Memorial Seminary; the Southeastern Construction Co., of Charlotte, has the general contract. The architect is Thomas Stevens of

Camden, N. J. The Board of Missions for Freedmen, Presbyterian Church is building at a cost of \$100,000 a dormitory 175 by 85 feet. John F. Scherer, Anniston is the contractor, and Thos. Stevens, the architect. The State Training School for Girls at Birmingham has a \$125,000 building program and Earl Kline, is the general contractor with Warren & Knight as architects. The Foundation Co., New York, is building the John Hebert Phillips High School, a 3-story fire-proof structure, estimated to cost \$1,000,000. D. O. Whilldin Birmingham, is the architect. A medical school building for the University of Alabama is more than half completed, being erected under the supervision of Miller & Martin, architects, Birmingham and A. Laycock & Son, Tuscaloosa. At Wylam a 16-room school is being built at a cost of \$175,000 after plans by D. O. Whilldin. Day & Sachs, are contractors.

The school building program in Florida shows a total of 35 structures now building valued at about \$2,966,000. At Gainesville an administration building for the University of Florida is well under way, the contract having been awarded the Southern Ferro Concrete Co., Atlanta. Plans for the structure which will cost \$100,000 were prepared by Edwards & Sayward, of Atlanta. A high school building and a negro school are also being erected at Gainesville at a cost of \$125,000. Winston & Penney have the contract for these two buildings; Edwards & Sayward are the architects.

Jacksonville contemplates the early erection of two junior high schools at \$300,000 each. Greeley & Benjamin, Jacksonville and W. B. Ittner, St. Louis, are engaged on the plans. Hugger Bros. Construction Co., of Montgomery, Ala., have the general contract for four buildings to be completed at the Southern College, Lakeland, at a cost of \$500,000. Plans were prepared by F. H. Trimble, Orlando, architect. A \$185,000 building at Orlando is under contract to C. C. Hanmer of that city; F. H. Trimble is the architect.

At Tallahassee the Florida State College for Women has under construction improvements costing \$200,000. Edwards & Sayward are the architects engaged and the Southern Ferro Concrete Co. have the general contract. Three buildings including a dormitory, science building and additions to the dining hall are among the principal improvements.

New school building work in West Virginia will cost approximately \$2,815,400, the number of structures represented by this amount being 40 scattered throughout the state. A \$125,000 administration building at Bluefield College is now under way. Jno. Pettyjohn & Co., of Lynchburg, Va., has the general contract. R. H. Hunt, of Chattanooga and A. B. Mahood, of Bluefield are the architects.

C. H. Snider of Fairmont is the architect and W. H. Spedden Co. the contractors for a \$110,000 building at Barracks-

ville, W. Va. A \$130,000 structure has just been completed at Bridgeport by W. H. Spedden Co., S. W. Ford, Clarksburg, being the architect. The South Junior High School at Huntington, three stories with a large auditorium, will cost \$250,000. C. Harrington Smith, of that city, is the contractor, and Meanor & Handloser, the architects.

Holden has a newly completed \$125,000 school building erected by Foreman & Putnam, contractors of Marietta, O. Richard M. Bates, Jr., Huntington, was the architect on this project. A \$125,000 building has just been completed at Philippi, with Westfall & Westfall, as the contractors.

H. A. Lucas, Bluefield, has the contract for a \$152,000 high school at Princeton, W. Va. Wysong & Jones, Charleston, are the architects. The same firm recently completed plans for another Princeton school building estimated to cost \$150,000. Richard M. Bates, Jr., Huntington, has completed plans for a \$100,000 school at Terra Alta.

The building program in Kentucky comprises 36 buildings estimated to cost \$2,773,711. Bowling Green will have a \$100,000 high school after plans by Clifford Shopbell, Evansville, Ind. Lexington has under way a \$160,000 high school for which Henry Clay Building Co. are the contractors and Frankel-Curtis Co., the architects. A negro high school at Lexington is being built by the W. T. Congleton Lumber Co. at a cost of \$125,000, the architects being Frankel-Curtis Co.

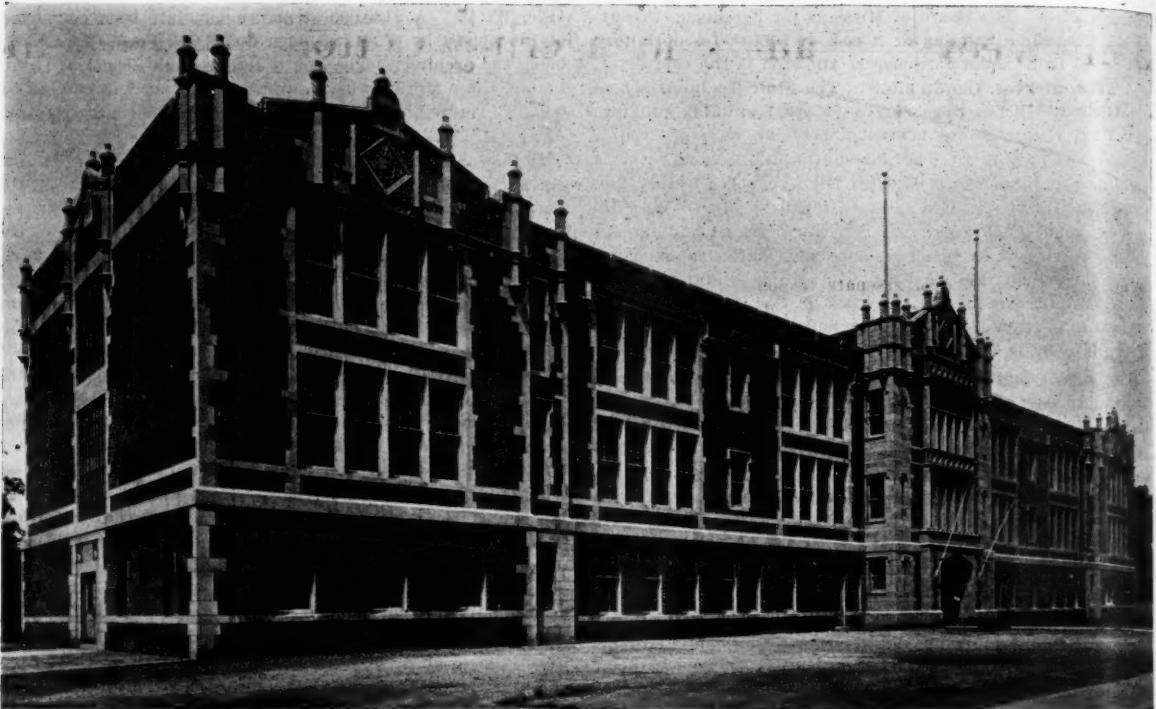
Louisville has a program involving big expenditures for repairs and new buildings. Joseph & Joseph are the architects for a girls' high school to cost \$300,000. Arthur J. Tafel is the architect for the addition to the Du Pont Manual Training School at \$125,000. Nevin, Wischmeyer & Morgan prepared plans for the colored high school costing \$125,000. Three barracks at the Kentucky Military Institute, Lyndon, are nearing completion under the direction of Nevin, Wischmeyer & Morgan at a cost of \$100,000. Middlesboro has plans for structures costing \$160,000.

South Carolina will invest more than \$2,138,730 in 47 school structures. A high school at Charleston being built by Simons-Mayrant Co. will cost \$126,000, the architects being Barbot & Benson. Throughout the state many buildings costing from \$10,000 to \$75,000 are being erected to supply the needs of the various communities and municipalities, and plans for other structures are progressing to a point where construction may be started within a few months.

Mississippi will invest in 29 buildings a total of about \$1,700,000. Grenada will have a \$100,000 building after plans by R. A. Heavener, Jackson, Tenn. Franker & Lindsley, architects of Jackson, are engaged upon plans for McColgan Brothers & Sisters Vocational Training School which will entail an expenditure of over \$500,000. A chemistry building at the University of Mississippi is nearing completion at a cost of



SOUTH JUNIOR HIGH SCHOOL, HUNTINGTON, W. VA. COST \$250,000. ARCHITECTS, MEANOR & HANDLOSER; CONTRACTOR, C. HARRINGTON SMITH; CONSTRUCTION ENGINEERS, W. AUSTIN SMITH & WILLIAM LEWIS, BOTH HUNTINGTON.



POPLAR GROVE SCHOOL BUILDING, BALTIMORE. TYPICAL OF RECENTLY COMPLETED SCHOOLS IN THIS CITY.

\$160,000. Doullut & Williams Co., Inc., New Orleans, are the contractors, and Theo. C. Link, Jackson, the architect.

In Arkansas there are 9 school buildings covered in this summary. A \$50,000 building under way at England, a \$80,000 school under construction and plans for another to cost \$75,000 at Fort Smith, and actual work under way on numerous others costing from \$10,000 to \$50,000 each makes up a total for the state of \$307,500.

British Cotton Exports Show Increase.

Manchester, Eng., June 16.

Cotton yarns and manufacturers shipped from the United Kingdom during May this year amounted to £15,734,375, an advance of £5,871,000 on May 1921, but a decline of £22,850,052 compared with May 1920. The total for the month of all manufactured articles was £45,072,540, an increase of £6,410,828 compared with May 1921, but a decrease of £55,654,924 in May 1920. The value of cotton yarns was £2,721,429 and the weight 20,767,300 pounds, which compares with £1,360,599 and 8,553,000 pounds, and £4,512,357 and 14,280,000 pounds, respectively for May 1921 and May 1920. The figures for piece goods are: May 1922, £11,544,557 and 341,424,800 square yards; May 1921, £7,389,252 and 145,603,800 square yards; May 1920, £30,536,503 and 443,251,000 square yards.

For the five months ended May 1922, the total of all manufactured articles was £240,993,359, or £44,578,304 less than in the corresponding period last year, and £181,628,854 less than for the similar period of 1920. Cotton yarns and manufacturers absorbed a total of £76,366,131 compared with £84,810,653 last year and £158,093,065 in 1920. Yarn exports for the five months amounted to £12,174,027 which represents a weight of 90,565,200 pounds. The corresponding figures for 1921 and 1920 are £9,053,461 and 41,900,900 pounds and £19,058,800 and 63,814,000 pounds respectively. A sum of £56,955,015 was accounted for by the shipment of piece goods of a total square yardage of 1,538,952,700.

From January to May 1921 the comparative figures were £67,955,123 and 1,058,382,200 square yards, and in the preceding year £124,196,946 and 1,990,954,500 square yards.

The weight of yarn sent abroad during May this year is slightly less than in the previous month, but the total for the period to the end of May is more than twice as large as in 1921. This is due to the much larger off take by customers in Holland (17,266), Bombay (9243), Germany (8352), China (5267), Switzerland (2721), Madras (1741), Bengal (1273). Buyers in Belgium (899), Norway (771), Argentine Republic (706), United States of America (613), and Burmah (539), also have increased their consumption. The most important of the few countries to which smaller shipments have been made is Roumania (4316). Turkey (506), Bulgaria (492), and France (341), also record decreases. The figures refer in thousands of pounds, to the difference between the exports this year and last.

Compared with previous months a substantial improvement took place in the shipments of cotton piece goods during May. The following markets have recorded increased takings, with the amount of the advance shown in thousands of square yards: China (64,357), Switzerland (52,756), Australia (49,329), Egypt (39,542), United States of America (28,875), Germany (27,444), British South Africa (25,747), British West Africa (19,108), Mesopotamia (19,046), Netherlands (18,236), Argentine Republic (17,600), Belgium (16,322). The following decreases occurred: Bengal (53,320), Roumania (11,498), Cuba (2705), Mexico (2727), Italy (1780).

\$600,000 Contract Let for Apartment Building.

R. P. Whitty Co., Union Trust Bldg., Washington, have been awarded the contract for construction of a \$600,000 apartment building at Sixteenth and M streets, N. W. The structure will have 8 stories and basement, and be of reinforced concrete and tile construction. Three elevators will be installed. The architect is J. H. de Sibour, Edmonds Bldg., Washington.

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Boll Weevil Again Endangering Cotton Crop—Will Calcium Arsenate Prove the Remedy?

By HOWARD W. AMBRUSTER, of New York.

Reports from the South during the last few weeks indicate a condition in some sections almost approaching panic on account of the overwhelming infestation of the growing cotton crop by the boll weevil.

The demand for calcium arsenate to poison this pest has taken a sudden spurt in consequence and despite the fact that large stocks were carried over from last season, when very little dusting was done, it appears that the supply available for delivery before the dusting season is over will be far short of the supply.

Many planters also decline to use the poison as they claim it is too expensive, notwithstanding that this year it is selling at from 9 to 12c per pound, a lower figure than ever before.

All of the calcium arsenate now on the market is produced from the white arsenic of commerce, which is a by-product of the smelters in the far west and abroad and the supply of which has no relation whatsoever to the demand. This limitation of the supply of arsenic has caused violent fluctuations in the price and there has been a prospect of an arsenic shortage should the use of calcium arsenate continue to develop as expected.

The man who has been primarily responsible for the development of this insecticide is B. R. Coad, entomologist in charge of the Delta Laboratory of the U. S. Bureau of Entomology at Tallulah, La. and such progress as has already been made in control of the boll weevil is due largely to his leadership as the commanding officer on the field of battle.

In this connection the announcement is of interest that a new process has recently been developed in the West by a former Government chemist of high standing, through which an oxidized arsenical ore of unusual character is utilized to produce calcium arsenate direct from the ore without refining the arsenic, and at a mere fraction of the cost of the manufacturing process now used with the by-product commercial white arsenic.

Production by this new process will not be available for the current season but it is expected that it will be ready by next year and such a development will be of tremendous importance to the South.

To any close observer of the situation it is evident that the ultimate selling price of calcium arsenate is a controlling factor in the development of its extensive use, also an unlimited supply, which must be available. The planter who has a very heavy infestation by the boll weevil, and who could otherwise expect a heavy yield per acre, will dust of necessity no matter how high the cost, within reasonable limits. In sections where the expected or normal crop is small and if, and when, the cost of calcium arsenate goes up instead of down, and cotton goes down instead of up, then that old elusive stand-by of the lecture room, "The Margin of Cultivation" becomes the deciding factor. To further complicate the problem, the arsenic market and cotton market move violently up and down from year to year and will undoubtedly continue to do so.

The specifications recommended for the dusting material, which must be met and guaranteed on the maker's label are mainly as follows: It must contain a minimum of 40 per cent of arsenic pentoxide, As_2O_5 ; it must not contain more than a maximum of .75 per cent of water soluble arsenic pentoxide, and it must be of a density of from 80 to 100 cubic inches to the pound.

These specifications should not present any difficulty to an efficient manufacturing organization, but that relating to

the water soluble content is complicated by the fact that under some conditions of manufacturing it has appeared that the calcium arsenate will test well below the .75 per cent water soluble pentoxide when it is made and later when a sample is picked up in the South by a Government field agent, the water soluble test will be considerably higher than the limit allowed and the maker will be in trouble.

As a matter of actual value as a spray the total arsenic content might go somewhat below the 40 per cent minimum stipulated, and the product, though not quite so effective as a poison, would still do the work; but the higher water soluble content is destructive to the plant itself and for that reason an actual hazard to the planter.

The increase in the production of calcium arsenate has brought about more careful chemical control of the manufacturing operations and actual improvement in processes now being developed will tend to raise the standard of the product and eventually preclude the presence of any water soluble arsenic in this product.

The specification relating to its physical condition was decidedly baffling to the manufacturers when Mr. Coad first issued it in 1918, as it is an arbitrary standard not dependent on either true specific gravity or sizing by screen test.

And as the grinding of the material is necessarily done in an air separation mill, the product when first made is sufficiently aerated to cause an almost liquid consistency. Packed in a barrel or drum and shipped, however, the air gradually seeps out and a bulk test for density when it arrives at the point of consumption bears no relation to its original fluffiness.

Government experimenters have now devised a simple testing apparatus which forces a given quantity of air into a fixed weight of calcium arsenate in such a way as to indicate the actual fluffiness or smoke-like quality as desired for most effective application to the plant. As all interested in either the production, sale, inspection or use of the product can use the same method of making this density test, this difficulty of standardizing the manufacture is largely overcome.

The inspection of the product in the field has been very rigid and considered harsh by some of the producers of inferior product but in view of the importance of protecting the planter against a defective material, it is difficult to present any valid argument against careful testing by the officials.

In considering the progress already made in boll weevil control with calcium arsenate it should be understood that experiments are still in progress by Government officials and private individuals which may indicate that some slight changes are desirable both in the compound itself and in methods of application.

One question which has been very puzzling on account of conflicting results in the test fields is the determination of the exact limitations of the density or fluffiness which give the most effective control.

The addition to the poison of some other substance like molasses, to make it adhere more firmly to the cotton plant has been tried, along with other mixtures too numerous to name. Many kinds of special dusting apparatus of both hand and mechanical operation are now offered to the planter by a great number of farm implement makers. These range from small inexpensive dusters operated by hand to elaborate

double team machines which cover several rows at one time.

Two new "Infant Industries" of sizeable proportions have thus been established, the manufacture of the poison itself and the production of the machines to apply it.

What the future will develop on this phase of the boll weevil problem is foolhardy to predict, but it is evident that the pest has come to stay and can only be controlled, not exterminated. Like the Colorado potato bug, from an insignificant beginning in one locality, it has followed its food crop through one state after another, until it now thrives almost everywhere cotton is grown within the United States.

To consider the historical record of the boll weevil in the United States, it is necessary to go back a good many years; the complete infestation of the Southern cotton states was only accomplished in the last year or so but the invasion over the Mexican border is recorded in the vicinity of Brownsville, Texas, in the year 1892.

The earliest authentic record of the insect itself was in 1843 when Boheman first described the "Anthomous grandis." Destruction of the cotton crop in Coahuila, Mexico and later in Cuba, antedated by many years its gradual approach to the Rio Grande. After it once crossed into Texas, the map showing the annual limits of infestation in the South, somewhat resembled those of France and Belgium during the war indicating the limit of invasion of the German army. But with this difference, that the German line gradually advanced and then receded while the boll weevil infestation has made a steady progress taking in county after county and state after state until the 1921 map shows only a very small percentage of the total area along the northern and extreme western limits of the cotton belt, which has not been more or less ravaged by this pest.

If as a matter of argument it could be admitted that the ratio of destruction of cotton by the weevil would increase in proportion with increase in infestation it would not be hard to prophesy the end of cotton raising in the South. This extreme conclusion is faulty however, as more intelligent methods of cultivation, of necessity, are prevailing in the heavily infested districts and entirely aside from the use of calcium arsenate, are vitally important factors in the fight for boll weevil control. As early as 1895 that grand-daddy of the bugologists, Dr. L. O. Howard, now chief of the Bureau of Entomology at Washington made a recommendation, which if it had been carried out would probably have prevented, and at least would have greatly retarded, the progress of the boll weevil north of the Rio Grande. Dr. Howard at that early date was sufficiently farsighted as an entomologist to perceive the danger from this pest for which means of control were then unknown and he urged the prohibition of cotton raising for a period of years in a belt along the southern border of Texas, just beyond the small area than infested. A rigid quarantine against the crop from the defected district in connection with this barrier raised by stopping the food supply of the weevil would have saved the situation, but it would have required an exceedingly unpopular piece of legislation to secure the result and Dr. Howard's wise advice was regarded as the ravings of a long haired scientist and was ignored.

The methods of prevention and control of the boll weevil which have been developed and attempted are many and varied.

They range from the introduction of other forms of insect life to attack the weevil; through many modifications of former careless cultivation to the highly scientific control by chemical sprays.

In the last twenty years there have probably been more official and private controversies in the South about the best way to handle the boll weevil than there were about the slavery question and the Civil War. It is a live issue and it is not losing in interest, rather the reverse.

It is estimated that one pair of boll weevils will produce over 12,000,000 progeny in a single season and though these figures must be suppositious, they indicate the tremendous scope of the problem. There is no expectation at present of exterminating the weevil; all efforts are merely to control it and reduce its destruction to an economical minimum.

The peculiar feature of this invasion to the northernmost limits of the cotton belt is that the weevil has apparently become acclimated. Originating in the tropics, when this pest first reached the latitude where frost sometimes prevailed in the winter months, it died out from the cold; now it has been demonstrated that the hibernating weevil will live through a comparatively cold winter.

In 1904 the Department of Agriculture introduced an ant from Guatemala into Texas as an enemy to the cotton boll weevil. The ant was an enemy but the weevil continued to increase and prosper despite the opposition.

Improved methods of cultivation of cotton include primarily a program of cleanliness in the plantations, and destruction of the cotton stalks by burning all fence line rubbish in the fall in order to exterminate the hibernating weevil. Deep plowing to turn the live weevils so far under ground they cannot dig their way out, earlier planting to permit the plants to mature before the young weevils start feeding and constant cultivation are methods of control which are undoubtedly effective, as is also a more careful selection of the cotton seed.

Mechanical devices invented include machines to shake the weevils from the growing plants and a vacuum machine to suck the bugs from the bolls.

The problem has been approached by the chemist with fertilizers to strengthen the plant on the one hand, and deadly poisons to kill the pest on the other.

Probably every known poisonous compound has been tried, starting with Paris green and London purple in the early days and including sulphur compounds, lead and calcium arsenate, and all of the standard spray materials. Special preparations for the purpose include compounds of arsenic with caustic soda and wood ashes, and with cayenne pepper, potash and other ingredients. And there have been tried out also coal tar compounds either for direct applications or for their fumes when burned in a smoking device.

Chemical warfare gases have been considered for the pest in the field and carbon bisulphide and hydrocyanic gas successfully applied for fumigation of the cotton seed itself before planting.

The success or measure of economic effectiveness of all of these chemical agents for boll weevil control has been in proportion to the actual toxic affect on the insect with a consequent larger crop on the one hand and due regard to the cost of extra labor and spray material on the other.

Whatever the actual degree of success that has attended the use of calcium arsenate, it is an undisputed fact that this spray has shown more definitely effective results than any other means of control, chemical or otherwise, and it seems to be generally admitted that there is no other method either in use now or in prospect which gives as much hope of ultimate control as the proper application of calcium arsenate of the right chemical and physical characteristics.

Nearly \$8,000,000 in Building Permits This Year.

San Antonio, Texas, June 24—[Special.]—Since the first of the year, building permits having a valuation of \$7,742,246 have been issued in this city. Included are 1551 dwellings that have been built or are now under way. In addition at least 1619 houses were improved or repaired. During the first five months of the year, 1538 permits for frame dwellings costing \$3,865,978 were issued, as well as 9 for brick houses costing \$72,400, four tile dwellings valued at \$15,200, and two tile-stucco dwellings costing \$26,000.

Construction and Allied Industries Form National Co-operative Organization.

[Special Correspondence Manufacturers Record.]

Washington, June 23.

The American Construction Council was formally organized in Washington this week with Franklin D. Roosevelt elected as president. The attendance totaled about 200 and included architects, engineers, general contractors, sub-contractors, labor organization officials, materials and equipment manufacturers and dealers, financial, bond, insurance and real estate interests, public utility representatives and federal, state, county and municipal officials. The basic purpose of this organization is to consider all phases of the construction industry with the intention of placing it on a much higher plane than at present, and to determine ways and means of bringing this about.

At the opening session, Secretary of Commerce Herbert Hoover, outlined the ideas he had in mind in fathoming the movement and laid down certain lines of work to which he felt the Council could most advantageously direct its efforts. Among these primary undertakings, Secretary Hoover suggested the standardization of grades, inspection and simplification of dimensions of construction materials, collection of statistics, encouragement of home building, zoning and proper building codes, seasonal and intermittent employment, jurisdictional disputes, apprenticeship, vocational training, and in general the elimination of unnecessary speculation, and on the whole the better functioning of the industry in regard to our national needs.

Following Mr. Hoover, Willis H. Booth, vice-president of the Guaranty Trust Co. of New York, pointed out in a careful analysis the possibilities of the organization from the outstanding things which he felt could be accomplished. Mr. Booth especially emphasized that if the public confidence is to be gained the aims and purposes of the Council must square and be comportable with the best public judgment.

Following this address there were five minute discussions by representatives of the different groups into which the Council has been divided. Those speaking for these groups were: Henry H. Kendall, Boston, Mass.; Thomas H. MacDonald, Bureau of Public Roads, Washington, D. C.; Calvert Townley, Westinghouse Electric & Manufacturing Co., New York; Frederick L. Cranford, Contractor, Brooklyn, N. Y.; John R. Alpine, Grinnell Company, Providence, R. I.; John Donlin, Building Trades Department, A. F. of L., Washington, D. C.; M. T. Bannigan, McQuade and Bannigan, Utica, N. Y.; William McClellan, McClellan & Junkersfeld, New York City; Ralph F. Proctor, Maryland Casualty Co., Baltimore, Md.

Each one of these spokesmen for the different groups expressed firm conviction that good results would follow the organization of the Council, and pledged the co-operation of the activities which they respectively represented to work together to bring about the beneficial results which it is anticipated this organization can accomplish.

The crux of the meeting resulted in the adoption of the following program as an outline of the aims of the Council:

The formation of a code of ethics acceptable to the whole industry and to the public;

The gathering of adequate statistics from all sources and resulting interpretation having all the facts;

The reduction of the national shortage of building trades mechanics and the establishment of the necessary apprenticeship system;

Cooperation in establishing uniform building codes throughout the country;

Cooperation with the railroads in expediting the revision of existing freight rates on construction materials. The establishing and strengthening of local organization throughout the country to bring about the cooperation of all elements in conformity with the principles of the Council;

The mitigation of the evils of seasonal employment and trade migration of labor;

The encouragement of local building shows;

Simplification, standardization and elimination of waste;

Education of the public to the distribution of its construction and maintenance requirements more evenly throughout the year;

The promotion of health and safety of workmen;

The reduction of loss of life and waste of construction materials from preventable fires;

The study of old buildings in order to establish superior methods of construction;

The education of the public as to the necessity and economy of properly maintaining existing structures.

Those who were elected to serve on the Executive Board are as follows:

Architects: W. Stanley Parker, New York City; D. K. Boyd, Philadelphia; Abram Garfield, Cleveland; Robert D. Kohn, New York; L. P. Wheat, Washington, D. C.

Engineers: Charles T. Main, Boston; Bion J. Arnold, Chicago; Peter Junkersfeld, New York; Charles F. Loweth, Chicago.

General Contractors: W. O. Winston, Minneapolis; F. L. Cranford, Brooklyn; N. F. Hoggson, New York; H. H. Williamson, Munsey, Pa.

Sub-Contractors: A. E. Coleman, Chicago; J. R. Alpine, New York; Benj. Dickinson, Bedford; Oscar Reum, Chicago.

Labcr: John Donlin, Washington, D. C.; John Coefield, Chicago; John J. Hynes, Chicago; Wm. J. McSorley, Cleveland.

Material and Equipment Manufacturers: Wright D. Goss, New York; F. W. Walker, Beaver Falls, Pa.; W. M. Wood, Decatur, Ill.; William Ritter, Columbus, O.

Material and Equipment Dealers: W. T. Rossiter, Cleveland; E. L. Jahncke, New Orleans; John E. Boyd, Philadelphia; M. T. Bannigan, Utica.

Financial Bond, Insurance and Real Estate Organizations: Willis Booth, New York; Harry A. Wheeler, Chicago; Irving B. Hiett, Toledo; James T. Hoveland, Philadelphia; Charles A. Hennery, New York.

Public Utility Construction: Gano Dunn, New York; Francis Blossom, New York; Jos. Alexander, Cleveland; C. H. Markham, Chicago.

Federal, State, County and Municipal Construction Departments: Rudolph P. Miller, New York; Chas. Upham, Raleigh; J. M. Gries, Washington, D. C.; W. T. Sargent, New York.

Federated Associations: Wm. F. Chew, Baltimore; Walter Klie, Cleveland; E. W. Reaugh, Cleveland; G. C. Mills, Webster City, Iowa.

Walker Gordon Merritt, attorney of New York City, in presiding at the meeting of the Council on the second day, emphasized in a telling manner the need of such co-operative action as the Council is aiming to achieve. His address was one of the most striking of the meeting, because of the very effective way in which he handled the various problems which face the industry. He pointed out things that must be done to put construction and its allied industries on a higher plane. He said:

"The evils of the construction industry are the evils of organizations, not the evils of individuals. Those evils have come about because of the selfish aims of the individual organization. The need is to restrain these selfish aims, and to have each group lay down a code of practice which must pass the judgment and be in accord with the rules and principles of the American Construction Council."

In stressing the necessity to work hand in hand with labor, he said that the organized labor movement is big enough to meet with and discuss its own problems with any of its critics. Mr. Merritt continued:

"If we all meet and reason together we shall think, feel, and act together. The relation at the present time between

employers and employees in the building trades, is one of periodic armistice. This Council must work out a plan of common counsel and joint action.

"One of the most important things which the Council must work out is a method of arbitration. All contracts should be subject to arbitration in accord with the rules of the Council laid down by men of practical standards.

"One of the greatest evils in the industry is the bargaining with corruption for fear that any attempt to uncover that corruption will embarrass future relations."

With reference to jurisdictional disputes, he stated that it is not legal to restrict the construction of metal doors, for instance, to metal workers or any particular work to any particular group of workmen. He held that the employer should be free to hire anybody on any job who can do the work for the wage paid, and that the need was for a broader craftsmanship rather than a more highly specialized one.

"This Council," he concluded, "must work out these problems. It must work through common counsel, co-operation and education. Such collective action will not stifle American individualism, but rather such collectivism will further that individualism. We unite to further liberty, not to restrict it."

Naval Stores Industry in Better Condition—Will Show Profit This Season for First Time in Years.

New Orleans, La., June 24—[Special.]—The naval stores industry of the South will pay a profit this year for the first time in many years, according to present indications. The turpentine and rosin produced by this country represents a value around \$40,000,000 a year, and the work gives employment to some 55,000 men. Except in peak years, the naval stores industry has been a losing game. It owes its continuance, under such unfavorable conditions, to the factorage system in the South, under which money is advanced to labor in the hope that good prices will prevail; then more money has to be advanced to take off the crop in face of certain loss to keep that loss down as far as possible.

Pre-war prices of turpentine and rosin were below the cost of production; obviously the prices last year, in July of which the deepest part of the slump was reached, were below production; and prices to-day are below the cost of production. The hope of a profit lies in the expected advance of rosin, for turpentine has already taken its advance, whereas rosin has remained almost stationary.

Note the following figures:

The cost of production in the 1913-14 season was \$50 a unit; last year, it was \$65 to \$75 a unit; this year it will be about \$75 to \$85. A unit is one 50-gallon barrel of turpentine and 3-1/3 barrels of rosin weighing 500 pounds each, both products being made during one process of manufacture.

Net receipts to producers in 1913-14 were \$40.33 a unit; in 1921-22, \$49.13; and this year, on the basis of May's figures, \$63.

Turpentine and rosin brought the following average prices during the three periods:

	1913-14	1921-22	1922	May
Turpentine, per gallon.....	.41	.62	.85	
Rosin, per cask of 250 pounds.....	\$4.82	\$4.12	\$4.85	

Turpentine in June, 1922, brought .91-3/4 cents, with rosin unchanged.

It is believed by Carl Speh, manager of the Turpentine and Rosin Producers Association, that turpentine will average 85 cents this season, but that rosin will go to \$7 a cask, an increase of \$2.15.

On the basis of 85 cent turpentine and \$7 rosin, the unit net receipts will be \$87.50, against a production cost of \$75-\$80-\$85. As only 12 per cent or thereabouts of this season's naval stores has been marketed, it is obvious that the producers will gain most from the advance.

The reason why turpentine is more sensitive to changing economic conditions is that it is a product that can not be stored, whereas rosin is a product that can. It is run into wooden casks and can be kept an indefinite period in the open air. Consequently, large stocks of rosin have accumulated, whereas there are no stocks of turpentine. Stocks of rosin are estimated at something under 900,000 barrels.

The estimate that rosin will rise to \$7 is based on the general index price of commodities.

The principal reason why the unit cost of production this year will be higher is that the yield per crop is considerably smaller, because of unfavorable weather conditions. A crop is the product of 10,000 pine tree surfaces that are bled.

This year's production of turpentine is estimated at 435,000 to 450,000 barrels, and of rosin 1,500,000 casks. Its value will be about \$38,000,000, or \$2,000,000 less than the average.

In normal times, the foreign markets took 55 per cent of the South's production of naval stores. Last year, they took only 44 per cent. With foreign exchange continuing as strong as it is, the trade expects foreign markets to take 48 per cent this year, and more next year.

The United States formerly produced 85 per cent of the naval stores, the remaining 15 per cent being produced by France, Spain and India. This country did drop to a production of 60 per cent of the world's output, but is now producing 70 to 75 per cent of the total. Mexico, Central America, Portugal, Greece, Japan, China and Algeria have now joined the ranks of naval stores producers.

Production in the South was distributed as follows during the 1920-21 season, according to the U. S. Census reports:

	Turpentine 50 gal. bbls.	Rosin 500 lb. bbls.
Florida	170,873	548,886
Georgia	133,067	425,529
Louisiana and Texas	80,927	266,819
Louisiana	65,618	214,529
Mississippi	33,426	175,807
Alabama	47,221	150,313
N. & S. Car.	3,070	9,999

Substantial Business Improvement Reported.

Figures received by the Department of Commerce up to June 20 indicate that the revival in business is getting on more substantial grounds. Among the favorable features may be mentioned the continued increase in the iron-and-steel industry which is now operating above the prewar level; the sustained activity in the building industry which continues to make new high records each month; the marked increase in the production of automobiles and trucks; the lower interest rates and increasing demand for money; the increase in employment and the decline in business failures. The stock market also continues active, with further increases in the prices of all classes of securities. Even the textile industry, which has been somewhat backward in recent months, showed greater activity in May.

Another matter of importance is the distinct upward trend of prices. This was more marked in May than in any recent month. In most instances the rise has not been great but it indicates a much firmer demand than has heretofore existed.

The continuation of the coal strike, with no immediate prospect of settlement, constitutes an unfavorable feature which has so far seemed to cause little uneasiness. Stocks of coal are still ample although the demands caused by greater industrial activities are using them up at a more rapid rate.

The contract will be awarded this month for the erection of a \$250,000 hospital building for the University of Missouri at Columbia, Mo. Jamieson & Spearl of Columbia are the architects.

June 29, 1922.

\$250,000 Plant for Broderick & Bascom.

St. Louis, Mo., June 26—[Special.]—Plans have been completed for a fireproof plant for Broderick & Bascom Rope Co. of this city, to cost about \$250,000 without equipment. It will be one of the most modern and efficient plants in the country, and construction work will begin just as soon as a suitable site has been selected. The new structure will consist of the factory proper and another unit containing the offices, warehouses for raw and finished materials, spooling and testing departments, machine shop, blacksmith shop, engine room and boiler house, and with the exception of the boiler house all will be under one roof.

Each of the two units will be 600 ft. long, the factory being 143 ft. wide and the other building 83 ft. wide. The structures will have brick walls, concrete roofs supported by steel trusses, and concrete floors. To provide for quick and economical handling of materials a double track switch will be laid along the entire length of the building containing the warehouses.

E. P. Fredick, general superintendent and wire rope engineer of the company designed the buildings and he will supervise construction. The erection of the new plant marks another epoch in the history of the growth of the Broderick & Bascom Rope Company which was established in 1875 and incorporated in 1882.

Building Activity Producing Shortage of Labor in Some Lines.

With regard to the general building situation, S. W. Straus & Co., bankers of New York, say:

"Unprecedented building activities prevail throughout the country and will continue apparently at present proportions through the heart of the season. Shortage of fuel is retarding activities to some extent, and, in centers where the activities are quite large, the demand for skilled workmen in some of the trades is greater than the supply. This labor shortage appears, primarily, to be due to the fact that apprentices have not been filling the places left vacant for various reasons by skilled laborers. As a result, the available supply in some of the trades is being gradually depleted which has effected an increase in labor costs by reason of builders bidding against each other in order to complete contracts on specified time. Special efforts are being made to recruit apprentices in order that the supply of skilled workmen may be augmented."

"It is noted also that the general business situation is being greatly helped as a result of the building movement, as through this means a brisk demand has been created for many basic commodities."

To Start Construction of Savannah River Bridge.

Charleston, S. C., June 24—[Special.]—Construction of the Savannah River bridge project to connect South Carolina and Georgia will be started in the near future, according to present plans. The first part of the bridge will be built across Front river a distance of 1490 feet including the draw span. The middle section will be 1815 feet, and the remainder 1998 feet across Little Black river. Two smaller structures will be built across the Laurel Hill and Beech Hill canals. It is estimated that the actual construction will require 18 months to complete.

\$800,000 Hotel Projected at Wilmington.

Wilmington, N. C., June 17—[Special.]—Plans are being discussed for erection of a hotel here to cost \$800,000. Roger Moore is president and Jas. H. Cowan, secretary of the company interested in the project. Architects will submit tentative plans and sketches for the structure within the next few weeks.

National Bank of Baltimore to Let Contract Soon for New Building.

Final plans have been announced for erection of a new building for the National Bank of Baltimore at the northeast corner of Baltimore and St. Paul Sts., to occupy the site of the present structure and the one adjoining it. The frontage on Baltimore Street will be about 80 feet and on St. Paul about 100 feet. Fred. T. Ley & Co., of New York and Theodore W. Pietsch, of Baltimore, are the architects. It is expected that the contract will be awarded early in July so that work may begin immediately after the bank moves into temporary quarters in the Merchants and Manufacturers Building on Light Street.

Auditorium and Market Contracts Total \$1,250,000.

Memphis, Tenn., June 24—[Special.]—Practically all of the contracts in connections with the construction of the city auditorium and market house have now been awarded, the total amount reaching nearly \$1,250,000. James Alexander Construction Co., has the general contract. Pritchard Brothers will receive the plumbing contract; the Newberry Electrical Co., St. Louis, will do the wiring and electrical work; and the heating system will be installed by the Fisher Heating Co. The program calls for completion of the structure by March 1, 1924.

It will be 350 by 350 feet of reinforced concrete and steel construction, and built after plans by C. O. Pfeil and George Ausumb, architects of this city.

Work Begun on \$250,000 Home.

Jacksonville, Fla., June 24—[Special.]—Ground has been broken in Orange Park for the winter home of Caleb Johnson, millionaire soap manufacturer of Milwaukee, Wis., and it is estimated that approximately \$250,000 will be expended upon the estate here. Construction will include a large residence, garage, servant's quarters, gardener's cottage, power plant and other buildings. There will be sunken gardens, tropical gardens, swimming pools, bulkhead improvements, etc. Scott & Mayer, architects, of Milwaukee are completing plans for the buildings. Ledlay Ogden of this city will handle the construction work.

Washington Again Breaks Its Own Record of Building Permits.

Washington, June 24—[Special.]—A new high record for building permits was established here this week when 73 were issued in one day. The previous high total was 63. Officials of the department express surprise at the activity indicated which is unusual for this period of the year. Most of the permits granted were for dwellings, one calling for 11 two story houses costing \$80,000, while another was for an \$80,000 apartment building.

\$450,000 Office and Store Building Contract Let.

Tulsa, Okla., June 24—[Special.]—Construction of an office and store building costing \$450,000 is provided by Thompson Bros. & Hughes, 641 Kennedy Bldg., who have awarded contract to A. T. Hingle, 908 Mayo Bldg., after plans by Atkinson & Olston, architects, of this city. It will be 80 by 150 feet of structural steel frame with reinforced concrete floors. Three elevators will be installed, two for passengers and one for freight.

Contract Awarded for \$250,000 Apartment.

Washington, June 24—[Special.]—The Weller Construction Co., are the contractors for a \$250,000 apartment building for Bessie L. Brown of this city. It will be of reinforced concrete and brick and five stories high. B. Stanley Simmons, District National Bank Bldg., is the architect.

THE IRON AND STEEL SITUATION

Market Quiet at Pittsburgh.

Pittsburgh, Pa., June 24—[Special]—The steel market has grown still quieter, partly on account of the season of the year, midsummer being always a dull period in transactions, and partly on account of the reserve of both buyers and sellers, who do not wish to commit themselves far ahead. The mills are very well sold up for the nearby future, in some lines into August, in other lines into September or later. Merchant bars are probably sold up the farthest ahead and tin plate the shortest distance. Tin plate consumers were free in anticipating possible trouble on account of the coal strike, and are now about a month ahead in the matter of supplies.

The cotton tie market will probably open in the early part of next month. Mills have accumulated some supplies, while they do not expect as heavy buying as usual on account of the cotton crop being under normal and the quantity of ties carried over from last season.

Production of steel is easily maintained, despite the coal strike, and shows a tendency to increase rather than decrease. Steel ingot production is now at a rate of about 39,000,000 gross tons a year, against rates of about 35,000,000 tons on April 1 and 20,000,000 tons last December. The steel industry is obviously doing remarkably well in face of the coal strike and steel producers exhibit no uneasiness, while steel consumers are evidently less fearful, as to deliveries of steel, than they were a month and two months ago. The union coal strike was fully expected, and consumers in most cases laid in stocks. The non-union strikes in the Connellsburg region were not expected, hence the case of the Carnegie Steel Company is particularly interesting, for normally this company operates its blast furnaces almost exclusively on Connellsburg coke or by-product coke made from Connellsburg coal. The Carnegie Company has just blown in a third blast furnace at the Farrell works, making 38 stacks operating, against 35 on May 15 and 34 on April 1, when the coal strike started. Its steel ingot production is now running at fully 77 per cent of capacity, against an average of about 70 per cent from the middle of March to the end of April.

The American Sheet & Tin Plate Company (Steel Corporation), which opened its books for sheet business for July on June 2, has now opened books for August and September also, at old prices, the prices made early in April by the advance at that time of \$3 a ton. Independents have been selling more or less at advanced prices, and will probably be able to maintain their prices as the leading interest has only about 25 per cent of the sheet capacity.

In bars shapes and plates prices above 1.70c are now uncommon, while 1.70c is obtained on much business, particularly for early deliveries. The Steel Corporation is selling chiefly at 1.60c, a price not frequently made by independents.

The market is quotable as follows: Bars, shapes and plates, 1.60c to 1.70c; hoops and bands, 2.40c to 2.50c; wire nails, \$2.40 to \$2.50; blue annealed sheets, 2.40c to 2.50c; black sheets, 3.15c to 3.30c; galvanized sheets, 4.15c to 4.30c; automobile sheets, 4.50c to 4.75c; standard steel pipe, 71 per cent basing discount; tin plate, \$4.75.

The steel market is faced with the prospect of there being the usual dull summer, particularly in July, and speculation in the trade is as to what kind of a market will develop afterwards, for early Autumn deliveries. On the one hand, the influence of stocking in steel in recent months on account of the coal strike would be to make the market easier, while on the other hand is the influence of increasing consumption. No matter when the coal strike ends it is improbable that steel production can be much increased, as there is the prospect of transportation shortage while

already labor scarcity is reported from many steel producing points.

The pig iron market remains almost stagnant. Quotable prices are unchanged but are largely nominal, at \$25 for Bessemer and basic and \$24 to \$25 for foundry, f.o.b. valley furnaces.

Strong Iron Market at Birmingham—Production Speeded Up in Every Line.

Birmingham, Ala., June 26—[Special]—Southern furnace interests are now holding their iron for \$20 per ton, No. 2 foundry, 1.75 to 2.25 per cent silicon, inquiries being answered that the new price is the most acceptable. While \$18.50 per ton is still mentioned as the minimum on third quarter delivery, but little is to be heard of any sales made in tonnage at that price. A few sales are again reported for fourth quarter delivery at \$20 per ton, and interests assert that the trade has taken kindly to the announcement that fourth quarter iron is being held for that price. Since business is being booked for third quarter delivery under \$20, charcoal iron has taken on an advance and \$32 is being asked. Coal and coke show no change the past week or two nor does cast iron pipe; high pressure pipe advanced the first of the month.

Coke also went up at that time to \$5.50 and \$6 for foundry coke, while pitch coke, produced by the Barrett Company is now being held at \$9 and \$10 per ton.

Coal output has reached the remarkable total of 33,000 tons. Pig iron production for the present month will show another increase though the month is one day less than May. Production at the Gadsden plant of the Gulf States Steel Company will show a material increase over the figures of last month, three of the open hearth furnaces, out of six, being in operation, with the entire finishing mills of the company producing.

Pig iron shipments promise to take on an impetus immediately after the first of the coming month when the reduction in freight rates goes into effect. Local consumption is showing an increase. The United States Cast Iron Pipe and Foundry Company has all five pits of its Bessemer plant in full operation with its product going to various directions in the United States and for export.

Alabama coal is now being sold into territories heretofore supplied by fields which have been feeling the effects of a strike. With a weekly production of 330,000 tons of coal, Alabama producers are in position to take on a considerable amount of business. Coke demands are also coming in steadily and there will be greater output here shortly. The Koppers company has started the work on the 25-ovens addition to the plant of the Alabama By-Products Company, Morris W. Buch, president.

Foundries and machine shops are all receiving orders, mostly in small tonnages and more labor is being employed in this line than for more than a year. The Virginia Bridge and Iron Company, taking over the plant of the Birmingham Steel Corporation, is pushing the work of re-equipping the plant, structural steel fabrication having been started. This company will lay considerable standard gauge tracks in their works and will take up repairing at once.

Work is to be pushed on the steel foundry to be constructed at the plant of the Chickasaw Shipbuilding & Car Company at Fairfield. Material will shortly begin assembling for the 10 and 12-inch merchant bar mill also to be built at Fairfield. Many rumors are to be heard in the vicinity of Ensley and Fairfield of propositions looking to the erection

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of additional blast furnaces and open hearth furnaces for iron and steel manufacture by the United States Steel Corporation. No official announcement is made from the general offices of the Tennessee Coal, Iron & Railroad Company, the local subsidiary of the Steel Corporation other than that of the foundry and merchant bar mill, with the intention of remodeling the present foundry at Ensley when the other foundry is completed.

Better Labor Conditions Attracting Northern Mills to the South.

Henry P. Kendall, president and treasurer of the Lewis Manufacturing Co., of Walpole, Mass., according to a newspaper report from that city, will take over the management of the Wateree mills in Camden, S. C., and the Addison mills in Edgefield on July 1. The plants were purchased in 1916 by the Lewis people. In addition to acquiring these plants it is said that the purchase of two other mills in South Carolina is contemplated. Labor conditions in Walpole are ascribed as the cause for the transfer of the Lewis plants to the South.

RAILROADS

Kansas City Southern Reports Good Gains.

The twenty-second annual report of the Kansas City Southern Railway Co. which covers the year 1921, says that during the twelve months there were established on the lines of the company twenty new industries, seven of them at Kansas City, Mo., three at Leeds, Mo., and the other ten at as many different places. Fourteen industrial tracks were constructed to serve new industries and six to serve existing industries; two more such tracks are under construction.

The following paragraph addressed to the stockholders is of much significance, being typical of the experience of the railroads concerning the use of cars under the Railroad Administration and, like sundry other statements, it refutes the allegations made on behalf of the Government several months ago as to the condition of equipment when the railroads were returned to their owners:

"When your property was returned by the Director General at the termination of Federal control, but 12.7 per cent of the freight car equipment was on your own rails. At the end of the year 56.4 per cent was on the home rails. As these cars came back they were found to be in wretched condition due to the neglect of essential repairs. A programme for the thorough rehabilitation of this equipment was adopted, and within the year 1343 cars were put in good condition, while 119 were dismantled and their value was written out of the property accounts. It is expected that this work will continue during 1922 so far as circumstances warrant."

The results of operation are stated as follows: Gross operating revenues, \$21,768,140; decrease as compared with 1920, \$587,086; total operating expenses, \$13,103,992; decrease, \$1,807,673; net revenue, \$5,664,148; increase, \$1,220,586; operating income after taxes and uncollectible revenues, \$4,581,049; increase, \$1,100,507. Ratio of operating expenses and taxes to gross revenues, 78.91 per cent, decrease, 5.50 per cent.

New Equipment.

Gulf, Mobile & Northern Railroad has bought 4 additional heavy decapod engines.

Georgia Railway & Power Co. has ordered 20 large trolley cars from the McGuire-Cummings Manufacturing Co., Paris, Ill., to be delivered in time for use October 1.

Wabash Railway has ordered 2050 new fifty ton composite gondola cars from the General American Tank Car Corpora-

tion, Chicago, and the Missouri Kansas & Texas Railway has ordered 200 forty ton refrigerator cars, and the Florida East Coast Railway 30 new tank cars of 10,000 gallons capacity with 50 ton trucks, from the same builders.

Osceola Cypress Co., Osceola, Fla., has ordered 1 mogul locomotive from the American Locomotive Co.

Norfolk & Western Railway is reported in the market for 1000 box cars of 50 tons capacity.

Wabash Railway has ordered 1500 automobile box cars, 750 from the American Car & Foundry Co. and 750 from the Pullman Company, Chicago. It has also ordered 750 steel hopper car bodies of 50 tons capacity from the Standard Steel Car Co. besides 9 chair cars from the American Car & Foundry Co., St. Charles, Mo.

Railroad Traffic Continues to Increase.

The Association of Railway Executives reports that loadings of revenue freight during the week ended June 10 totaled 846,002 cars, an increase of 95,357 cars as compared with the preceding week, according to reports received by the car service division of the American Railway Association, but this large increase was in great part due to the fact that the Decoration Day holiday occurred in the previous week. However, there was an increase of 24,871 cars as compared with the week before that and in comparison with the corresponding week of last year, an increase of 58,719 cars is shown. Loadings of coal, which totaled 94,824 cars for the week were larger than during any previous week since the strike began, this being an increase of 8000 cars over the preceding week. In addition to showing increases of traffic as compared with the same week of last year the Pocahontas and the Southern districts also showed increases as compared with 1920.

New Freight Service.

Announcement is made by the Southern Railway System of the establishment of rail and water freight service between Philadelphia and the South in connection with the Inland Steamship Company, via Pinners Point, the Southern's terminal opposite Norfolk, Va. Rates with the usual differentials under the all-rail rates will apply on traffic moving via this route between Philadelphia and contiguous territory on the one hand and points in the Carolina, Southeastern and Mississippi Valley territories on the other.

Concrete Railroad Ties Used.

The Norfolk & Portsmouth Belt Line Railroad, which for the past three years, it is stated, has tested in service several specimens of a concrete railroad tie invented by W. T. Dickey, has it is reported, given an order for more of these ties to the American Concrete Tie Corporation, of Portsmouth, Va., which will manufacture them there. Among those interested in this new company besides Mr. Dickey is J. C. Darst, who is the first vice president. The company was organized recently.

Electrification Contemplated.

Terrell, Tex., June 24—[Special]—President E. H. R. Green, of the Texas Midland Railroad, is planning important improvements to the road which are said to include electrifying the line from Terrell to Paris, Tex., 84 miles, on which engineers have been engaged in preliminary work for some time. The total length of the road from Paris to Ennis, Tex., is 124 miles.

A report from Atlanta says that the Georgia Motor Bus Lines Association has been organized to extend the motorbus business in Georgia and to bring about greater use of the motor truck for freight transportation.

GOOD ROADS AND STREETS

Ultimately to Connect up All Federal Highways by Interstate System of Primary Roads.

A system of highways that will serve the whole country and be far superior to any other in the world is being mapped out by Federal and State engineers, according to the Bureau of Public Roads. It is estimated that the system will comprise 180,000 miles of road. The Federal highway act recently enacted specifically requires that all Federal aid be spent on a connected system of highways consisting of not more than 7 per cent of the road mileage in each state, and that this system shall consist of interstate or primary roads and intercounty or secondary roads.

Proposed systems have been received by the Bureau from all but eight states. These systems are plotted on a large map of the United States and carefully examined as to coordination with the roads of adjacent states and service to all sections of the country. Where coordination is not satisfactory, conferences are held with all interested state highway officials and routes adjusted.

Many states have already worked out such problems with their neighbors. As an example, the system sent in by Nebraska showed a big gap in an important road along the northern boundary. It was learned, however, that South Dakota would follow with a system that would fit like pictures on toy blocks. Since the Federal highway act of last November became a law, only roads certain to be in the system have been approved for construction.

Lower Prices on Highway Materials.

A considerably lower level of prices for the various items entering into highway construction is reported by the Bureau of Public Roads. This conclusion is based on the following prices by successful bidders on Federal-aid roads during April and are averaged for the whole of the United States. Some of the figures cover a large volume of work well distributed over the country, while others are based either on small volumes or scattering reports.

The figures which cover the cost in place are as follows: Earth excavation, common, 33 cents a cubic yard; rock excavation, \$1.26 a cubic yard; gravel, \$1.44 a cubic yard; sand-clay, 45 cents a cubic yard; crushed stone, \$3.42 a cubic yard; structural concrete of various classes ranges from \$14 to \$21.20 a cubic yard. For surfacing, the following are the prices by the square yard: Gravel, 40 cents; surface-treated macadam, 50 cents; bituminous concrete, \$7.97; plain cement concrete, \$2.17; reinforced concrete, \$2.54; and brick, \$3.70. Reinforcing steel has cost \$0.053 a pound and structural steel, \$0.059 a pound. Cement has been furnished to contractors by the following States at the prices given by the barrel: New York, \$1.73; Wisconsin, \$1.94; and Arkansas, \$2.70.

Exhaustive Tests of Concrete Roads.

Final preparations are being made at Washington for tests on the durability of concrete roads of various materials from different sections of the country, and as nearly as possible the conditions will approximate those found on the road. The test will include about 65 sections of concrete wearing surface, and upon the roadway a specially constructed car with two automobile truck wheels equipped with solid rubber tires and loaded to represent a truck will be operated. The car will be guided by a small rail to hold it in position, the power being applied by means of a motor connected to the wheels. The apparatus will be operated around the circular track at a speed of about 20 miles an hour.

The test will include the use of truck wheels equipped with different kinds of tires and the use of non-skid chains. It is

also probable that a steel-tired wheel will be used. The object of this series of experiments is to determine the relative wear of the different concrete sections under actual road conditions when subjected to the traffic of automobile trucks with different kinds of wheels and tires, and also to furnish a comparison between actual service conditions and laboratory tests.

Notes on Good Roads Construction.

The contract for the construction of 6.6 miles of road from Woodbury to the Rutherford county line at Readyville, Tennessee, has been awarded Boyd Williams of Murfreesboro. J. B. Ramsey, of Fayetteville, will construct several bridges at a cost of about \$75,000, and the road work will cost about \$160,000.

The State Highway Department of Missouri has let the contract for 16.5 miles of highway between Fredericktown and Coldwater to D. H. Hogan, of Little Rock, Ark., at a cost of \$210,000. This will open a new direct route from St. Louis to Poplar Bluff via Fredericktown and Greenville.

TEXTILE

\$500,000 Contract Let for New Unit to Riverside and Dan River Mills.

Danville, Va., June 24—[Special.]—The Riverside and Dan River Cotton Mill Co., Inc., has announced the award of a contract to John P. Pettyjohn Construction Co., of Lynchburg, for a new unit to its large group of textile mills at Schoolfield, estimated to cost approximately \$500,000. This is the first major construction project undertaken by the company since the erection of the large concrete mill of the Riverside group.

Lockwood, Greene & Co., of Boston, prepared the plans for the structure, work on which will be started in the near future. It will house the bleachery and be erected in a large open space behind the present cotton houses. It will be of reinforced concrete, three stories high and basement. Upon completion the bleaching and finishing machinery now scattered about the various units will be moved into the new structure, and the space thus rendered vacant will be used for carding and spinning, etc.

Processing Company, Capitalized at \$300,000, to Erect Plant.

Rutherfordton, N. C., June 24—[Special.]—The Spinners Processing Co., Inc., with a capital stock of \$300,000, is the name of a newly organized textile enterprise at Spindale. The new firm will make mercerizing yarn by warp mercerizing process, and will also be equipped to furnish bleached, dyed and gloss yarns. A new building will be erected, 135 by 240 feet, two stories high with basement. It will be of the regular mill type construction with brick walls, steel sash and concrete floors.

Potter & Schackelford, Greenville, S. C. are the contractors. It is hoped to have the plant in operation in September, and the work is being pushed. Contracts have been placed for modern warp mercerizing equipment, to be furnished by the Textile Finishing Machinery Co., of Providence, R. I. The plant will have a capacity of 100,000 pounds of yarn weekly. Loading and unloading will be facilitated by placing the second floor on a level with box car floors. All winding, inspecting and shipping will be done on the second floor. Quilters, purchased from the Whiting Machine Works and cone

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winders from the Foster Machine Co. will be installed.

The yarn will be shipped to the plant by the various mills subscribing to the stock, and in addition a large amount of combed yarn will be bought from the outside.

A large warehouse adjoining the mill is another unit of the plant, and 25 houses are being erected as the first unit of a village. A boiler house and caustic recovery plant will also be built. Ernest Scott & Co., Fall River, Mass., will furnish the equipment for the recovery of soda used in the mercerizing machine. Two boilers of 300 horse power each will be installed to furnish steam for heating and for the finishing operations, etc.

The officers of the new company include: C. W. Johnson, Charlotte, president; R. H. Johnson, Charlotte, vice-president; S. E. Elmore, Spindale, Treasurer; K. S. Tanner, Spindale, secretary. The directors are: C. W. and R. H. Johnson, W. W. Higgood, Leake Spencer, John Tilet, of Charlotte; and S. E. Elmore and K. S. Tanner of Spindale.

Continued Improvement Manifested in Textiles.

Knoxville, Tenn., June 24—[Special.]—The textile industry is apparently coming back into its own. Mills everywhere are preparing to take advantage of a large demand, particularly in finished goods, which is expected by fall.

Finished cotton cloth is now commanding relatively the highest price, according to S. W. Duggan, secretary-treasurer of the Knoxville Spinning Co. Conditions in the yarn industry are steadily improving; it has made an advance of two cents per pound compared with a four and a half increase in the price of raw cotton.

Mills that manufacture underwear are looking forward to a heavy demand by the end of another month, when orders will be placed for fall trade.

According to local textile mill men the industry in the South is making greater strides than in the North, and this is particularly true in the mercerizing field. A heavy demand for high grade mercerized goods has become increasingly evident in the last few years.

New England Mill Moves South.

Gastonia, N. C., June 26—[Special.]—A large amount of spinning machinery from the Jenckes Spinning Co. plant at Pawtucket, R. I., will be moved to the Loray Mills in this city owned by that company. Contract has therefore been awarded the Aberthaw Construction Co., of Atlanta, Ga. for a five story mill to cost approximately \$200,000. This mill will house approximately 40,000 spindles, all of which will be transferred from the present Pawtucket plant.

An explanatory statement issued by the company is in part as follows:

"As a direct result of the labor trouble which has kept the large spinning plant of the Jenckes Spinning Company closed for some months, the company announces that it will move an appreciable amount of spinning machinery to its Loray Mills plant at Gastonia, N. C."

Textile Mill Notes

Contracts have been let for an addition to the present mill of the Ruby Cotton Mills, Inc., Gastonia, N. C., giving 3500 additional spindles. The company has an authorized capital stock of \$200,000 common and \$100,000 preferred. Cotton yarns will be the output totaling about 2500 pounds daily. The new building will be 80 by 92 feet of brick. J. A. Smith, Gastonia, is the contractor. A total of 10,000 spindles will be contained in the present mill and the addition. All machinery has been purchased and construction is well under way. The Whitin Machine Works, Whitinsville, Mass., will furnish most of the equipment, which will be electrically operated. R. C. Biberstein, Charlotte, N. C., is the architect-engineer in charge.

The Wellman Cotton Mill Co., Athens, Ala., with a capital stock of \$200,000, has a daily capacity of 10,000 pounds of hosiery yarn, tens and twenties. Two hundred and fifty employees are engaged, and 400 spindles, Foster winders, are used, 250 horse power being required to operate the plant. Officers are:—Shelby Fletcher, president; R. E. Spragins, vice president; Walter M. Wellman, secretary-treasurer.

The Spinners Processing Co., Spindale, N. C., has announced plans for a building 243 by 137 feet, two stories high, to cost approximately \$80,000. Potter-Shackelford, Inc., Greenville, S. C. are the contractors for the structure which will be of brick and timber.

An additional building for slashing and drawing-in has been completed at the Watts Mills, Laurens, S. C., which has a capital stock of \$1,250,000. The new structure is 98 by 100 feet, and cost approximately \$17,500. J. E. Sirrine & Co., Greenville, S. C., were the architects-engineers in charge.

Textile Mills Incorporated With \$1,200,000 Capital.

Knoxville, Tenn., June 24—[Special.]—The Appalachian Mills Co. is the name of a newly organized concern incorporated here with a capital of \$1,200,000 to take over the operation of textile mills in this city. J. P. Browne, is president and general manager; Ray N. Lotsbeith, vice president and treasurer; Mack O. Thomas, vice president and secretary.

1,500,000 Pounds of Texas Wool Sold.

Kerrville, Tex., June 24—[Special.]—The entire offering of 1,500,000 pounds of wool at the sale here last week was sold to Winslow & Co., Boston, Mass. The twelve-month wool was taken at \$1.16 landed Boston and the eight-month on a basis of \$1.05, according to reports.

Continued Good Trade in Hardwood With Advancing Prices.

Memphis, Tenn., June 24—[Special.]—The large volume of inquiries for hardwoods now reaching Memphis is taken to indicate a continuation of good business within the immediate future without the appearance of the usual summer lull in trading. Last week the firms here reported business as "spotted"; some received good orders while others reported a quiet week. But prices are advancing as consumers find it more difficult to find their requirements. Warnings of a car shortage have had an important influence upon buyer and seller alike. Consumers are looking forward to good business during the last half of the year, and they are anxious to get materials delivered before transportation difficulties hamper factory operations.

Various branches of the building trades are buying in big volume. There is no indication yet that this has reached peak, and construction is being maintained throughout the country at high level. Hardwood flooring manufacturers are buying at the usual rate but they are endeavoring to get lower prices.

Buying by automobile factories continues good, in keeping with the high sales of May and the first two weeks in June.

Furniture manufacturers anticipate an enormous buying movement as a result of the widespread activity in home building. Dealers report low stocks, and are now placing orders to insure delivery in the future. Prices of lumber and glass have increased recently, which may result later in advancing furniture prices. Unusual interest is being manifested in sales conditions by dealers all over the country, who want to provide for their fall and winter goods. The first two days of the midsummer furniture market in Grand Rapids found 250 buyers registered.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Airplane Plants, Stations, Etc.

Fla., Pensacola—Government let contract to C. H. Turner Co., 17½ Palafox St., to extend aviation field for land plane use at Naval Air Station, covering total surface of 44,000 sq. yds.; \$29,501; to Doullut-Williams Co., New Orleans, La. to construct 120-ft. concrete runway, of this 80 ft. will be submerged, construct 1600 ft. pavement along edge of beach, \$97,900; Navy Dept. Engrs.

Mo., Kansas City—For full details see Miscellaneous Construction.

Va., Richmond—Air Crafts—Aerial Transport Corp., capital \$20,000,000, Incptd. with Edmund M. Preston, Prest.; Whiting G. Faulkner, Secy.; establish and operate national transportation system, planes carrying capacity from 2000 to 15,000 lbs. and 12 to 36 passengers.

Bridges, Culverts and Viaducts.

Ala., Demopolis—State Highway Dept., Montgomery, Ala. For full detail see Mchly. Wanted—Bridge Construction.

Ala., Palos—Jefferson County Board of Revenue, Birmingham, Ala., plans building bridge across Little Warrior River; \$60,000; Claude E. Rogers, Engr.

Fla., Stuart—Palm Beach County Commsrs. build 3 bridges. For full detail see Mchly. Wanted—Bridge Construction.

Fla., West Palm Beach—Palm Beach County Commsr. For full detail see Mchly. Wanted—Bridge Construction.

Ga., Savannah—Chatham County Commsrs., plans building bridge over Savannah River to connect South Carolina and Georgia; first part, 1490 ft. including draw span, across Front River, concrete; middle 1815 ft., concrete; other part, 7998 ft. across Little Back River, concrete or treated timber; 2 smaller structures across Laurel Hill and Beech Hill canals, concrete or treated timber; invite bids.

Miss., Louisville—Winston County Board of Supvrs., build following bridges:

Over Town Creek Drainage Canal, on Macon road.

Over Tallahaga Drainage Canal, on Lake road.

Swinging arch in bridge over Noxubee Creek at Pughs mill; bids opened July 3.

Miss., Oxford—Lafayette County, Board of Supvrs., build 2 bridges. For full detail see Mchly. Wanted—Bridge Construction.

Missouri—State Highway Dept., Jefferson City, Mo., build 8 bridges. For full detail see Mchly. Wanted—Bridge Construction.

Mo., Glasgow—Howard and Saline Counties and Missouri State Highway Dept. For full detail see Mchly. Wanted—Bridge Construction.

North Carolina—North Carolina State Highway Dept., Raleigh, let contract for fol-

lowing State Projects:

614—Cabarrus County, to Oliver & Costelle Bros., Knoxville, Tenn., at \$37,714.

316—Brunswick County, to Batson-Cook Co., West Point, Ga., at \$25,131; both reinforced concrete.

364-B—Onslow County, to A. W. McClay, 2400 Grove Ave., Richmond, at \$41,744.

502—Alamance County, to Hanford Bros., Burlington, at \$58,250; all structural steel and reinforced concrete.

N. C., Altamahaw—Alamance County Commsr., Graham, N. C. For full detail see Mchly. Wanted—Bridge Construction.

Okla., Blackwell—Kay County plans expending \$60,000 to build steel and concrete bridge across Chickasha River on Newkirk road. Address County Commsr.

Okla., Chickasha—City, O. Coffman, Mayor, plans building bridges over Line Creek at 4th and 6th Sts.; both cantilever type; reinforced concrete; bids opened July 5 or 6; J. R. Welborn, City Clk. (Lately noted bids until June 8.)

Okla., Oklahoma City—Oklahoma County Commsr., build 3 bridges. For full detail see Bridge Construction.

S. C. St. Matthews—Calhoun County Commsr. For full detail see Mchly. Wanted—Bridge Construction.

Tenn., Clarksville—State Highway Comsn., Nashville, Tenn. For full detail see Mchly. Wanted—Bridge Construction.

Tenn., Woodbury—For full detail see Road and Street Construction.

Tex., Beaumont—Jefferson County, J. B. Peck, County Judge, plans building concrete deck girder and concrete trestle bridge across Pine Island Bayou, on State Highway No. 40; 425 ft.; \$42,500; A. C. Love, County Engr.

Tex., Brenham—Washington and Waller Counties plan building bridge across Brazos River on State Highway No. 20; 2800-ft. earth approach; 700-ft. span; \$200,000; J. H. Chappell, County Judge; G. A. Brocker, County Engr.

Tex., Del Rio—Val Verde County plans building bridge across Rio Grande River. Address County Commsr.

Va., Front Royal—Virginia State Highway Comsn., 116 S. 3rd St., Richmond, Va. For full detail see Mchly. Wanted—Bridge Construction.

Va., Norfolk—City. For full detail see Mchly. Wanted—Culvert Construction.

Va., Norfolk—Contracting Officer, Construction Service, Compartment C, Warehouse 4, Quartermaster Intermediate Dept., remove wooden viaduct on Maryland Ave.; bids opened June 28.

Va., Portsmouth—City, and Norfolk County plan expending \$125,000 to build West Norfolk Bridge; creosoted piles; 140-ft. steel

draw; J. P. Jersey, City Mgr., Portsmouth; R. B. Preston, County Road Engr., Norfolk; invite bids.

W. Va., Bridgeport—Harrison County, build West End Bridge, to connect Kirkwood with National Road; low bidder Thomas Bigelow, at \$25,804. Address County Commsr.

W. Va., Bucknannon—City let contract to Edwin Starcher, Lost Creek, W. Va. for concrete bridge across mill race on Island Ave. Address The Mayor.

W. Va., Clarksburg—Harrison County Court plans building 16 small cottages.

W. Va., Salt Rock—State Road Comn., Charleston, W. Va. For full detail see Mchly. Wanted—Bridge Construction.

W. Va., Weston—Lewis County Court let contract to Concrete Steel Bridge Co., Clarksburg, W. Va., at \$26,000, for concrete bridge; Mayberry Harrison, charge of construction.

Canning and Packing Plants.

Ala., Gadsden—Jones Packing Co., capital \$10,000, Incptd. by Paul Griffith, Prest.; J. W. Lee, V.P.; C. W. Jones, Secy.; operate Jones Abattoir.

Coal Mines and Coke Ovens.

Ala., Birmingham—County Coal Co., William F. Sossong, Prest., Carnegie, Pa., making improvements at mines at Grant's mill; contemplate building all steel tipple; also plans opening two or more entries on properties.

Ala., Fort Payne—See Mining.

Ala., Riverview—For full details see Miscellaneous Construction.

Tenn., Andersonville—West Virginia Coal Co., capital \$15,000, Incptd. by T. O. Busbee, Julius Kersten and W. H. Workman.

W. Va., Kistler—Cunningham, Miller & Enslow, Huntington, W. Va., let contract to Fairmont Machinery Co., Fairmont, W. Va., to erect rope and button conveyor equipment; \$25,000; hourly capacity of plant 150 tons.

W. Va., McDowell County—Hardy Coal Co., Paul Hardy, Prest., Huntington, W. Va., install 4000 ton capacity plant on Fore Pole Creek, lay 3 mi. branch line; acquired 6000 acre coal land.

W. Va., Morgantown—Poland Co-operative Coal Co., capital \$10,000, Incptd. by George Poland, William Kearns and Louis Kennell.

W. Va., Whitby—Spencer Coal Co., W. H. Ruby, Propr., install additional equipment, increasing capacity; changed name from Bowyer Smokeless Coal Co.

Cotton Compreses and Gins.

Tex., Abilene—Western Compress & Storage Co., let contract to G. B. McCauley, to erect cotton warehouse; cost \$15,000.

Tex., Beaumont—Structure Gin Co., capital \$7500, Incptd. by J. L. Cruce, W. T. Montgomery, C. K. Ryan.

Tex., Hamlin—Western Compress & Storage Co., Abilene, let contract to G. B. McCauley, Abilene, for cotton warehouse; cost \$12,000.

Tex., Mineola—Mutual Gin Co., capital \$14,000, Incptd. by R. Bergfield, W. W. Perry, H. W. Meredith.

Tex., McKinney—Western Compress & Storage Co., Abilene, let contract to G. B. B.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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McCauley, Abilene, Tex., to erect cotton warehouse; cost \$20,000.

Tex., Slaton—Western Compress & Storage Co., Abilene, let contract to G. B. McCauley, Abilene, Tex., to erect cotton warehouse; cost \$12,000.

Cottonseed-Oil Mills.

Tex., Mineola—Wood County Cotton Oil Co., capital \$56,000, incptd. by R. Bergfield, W. W. Perry, H. W. Meredith.

Drainage Systems.

Ark., Gillet—Farrelly Lake Levee Dist., Little Rock, Ark., construct concrete flood gates and appurtenances at Big Bayou Meto; 50,000 cu. yds. excavation, 24,000 lin. ft. round foundation piles, 20,000 sq. ft. steel pile cut off walls, 6500 cu. yds. concrete, 200 tons reinforcing steel, 150 tons gates and accessories, 1500 ft. 2-in. and 1000 ft. of 1½-in. C. I. pipe and fittings and 30 tons hoisting apparatus; bids until July 18; Ayers & Miller, Engrs., McCall Bldg., Memphis, Tenn. (See Mchy. Wanted—Flood Gates and Appurtenances.)

Ark., Pine Bluff—Farrelly Lake Levee & Drainage Dist. let contract to W. P. McGeorge to construct 2 unit gate at mouth of Little Bayou Meto; \$150,000.

Miss., Batesville—Long Creek Drainage Dist. Commrs., R. L. Thompson, Prest., construct drainage canal; 6¾ mi. system containing 123,000 cu. yds.; bids until July 10; Bobo & Collier, Engrs., Clarksdale, Miss. (See Mchy. Wanted—Drainage.)

Electric Plants.

Ala., Selma—Alabama Power Co., will extend lines to Marion Junction, distance of 15 mi.

Fla., Homestead—City, B. M. Duncan, Engr., opens bids July 28 to construct reinforced power house, cost approx. \$7000; develop 300 to 400 H.P. (Lately noted to vote in July on bonds.)

Fla., Jacksonville—City Comsn. will expand about \$11,332 in rebuilding electric trunk line to Ortega.

Fla., Live Oak—City Council approved plans for installation of white way.

Fla., Pine City, P. O. St. Petersburg—Pine City Property Owners Progressive Assn., J. A. Monney, Secy., interested in establishment of electric light plant.

Fla., Quincy—City will enlarge and equip electric light and water plants; bids until July 18; lately noted voting \$40,000 bonds; J. P. Smith, Clk.

Tex., McLean—For full details see Water Works.

La., New Orleans—New Orleans Railway &

Light Co., Frank Frost, Supt., is installing new turbine at central power plant on Market St., supplying 20,000 additional K.W.

Mo., Liberty—City contemplates improvements to lighting system. Address The Mayor.

Miss., Kosciusko—City will rebuild burned light and water plant. Address The Mayor.

N. C., Lenoir—A. M. Kistler of Caldwell Power Co., Morgantown, has purchased Citizens Light & Power Co.'s plant, power lines, ice plant, etc.

N. C., Spindale—For full details see textile Mills.

N. C., Wilmington—City contemplates extending Princess street white way. Address Board of Commls.

Okla., Rush Springs—City will construct electric lighting system; voted \$5000 bonds; V. V. Long & Co., Oklahoma City, Engrs.

Tex., Brownfield—City will construct electric light plant; votes July 21 on \$16,000 bonds. Address The Mayor.

Tex., Dallas—Dallas Power & Light Co., construct 55,000 gal. oil tank in W. Dallas.

Fertilizer Plants.

Va., Portsmouth—Fisheries Products Co., construct \$15,000 building on South Branch.

Flour, Feed and Meal Mills.

Ky., Elizabethtown—Quaker Feed Co., capital \$6000, incptd. by Ernest C. Eberts, La Rue Cofer, Charles Herman.

Miss., Laurel—Merchants Grocery Co., Hattiesburg, Miss., will erect mixed feed plant; cost about \$75,000.

Mo., St. Joseph—Missouri-Kansas Grain Co., capital \$40,000, incptd. by Carl N. Duehren, J. Williams, A. E. Corbin.

Mo., Truesdale—Hugo J. Nistendirk erect 25 bbl. capacity flour mill.

Mo., Warrenton—August F. Sievert will erect 25 bbl. capacity flour mill.

Foundry and Machine Plants.

La., Baton Rouge, Route 4—Wright Steam Motor Co., J. B. Wright, Prest.-Gen. Mgr., will erect approx. 100x150-ft. ordinary construction plant; install several 6 to 18-in. lathes, milling machine, shapers and other machine shop equipment. (See Mchy. Wanted—Machine Shop Equipment.)

Tex., Electra—Machine Shop—U. S. Machine Shop, capital \$30,000, incptd. by O. M. Stridham, Ed. Campbell and J. M. Hemby.

Va., Clarksville—Implements—Clarksville Farmers Implement & Supply Co., Incptd. with S. G. Chandler, Prest., Buffalo Junction, W. Va.; H. A. Noblin, Secy., Clarksville.

W. Va., Huntington—Mill and Mine Machinery—Clarence M. England, Logan, W. Va. and others, reported to acquire controlling interests in Miller Supply Co.

Gas and Oil Enterprises.

Ky., Albany—Beech Bottom Oil & Gas Co., increased capital to \$100,000.

Ky., Dry Ridge—Grant County Supply Co., capital \$7000, incptd. by Walter L. Conrad, R. H. Stephenson, J. E. Vance.

Ky., Salyersville—Capital Development Co., capital \$100,000, incptd. by John Reed, C. M. Reed W. E. Crutcher.

La., Monroe—Ouachita Natural Gas & Oil Co., P. O. Box 1199, will construct 6-in. pipe line from Swartz, La. to Sterlington, La., for gas line to gasoline absorption plant thence to carbon plant, 9½ mi.; cost about \$60,000; construction by owner and company's engineer. (Lately noted.)

La., Monroe—Stovall Drilling Co., capital \$100,000, incptd. by Fred Stovall, Prest.; L. S. Robert, V.-P.; H. D. Briggs, Secy.

Okla., Sinclair—Sinclair Crude Oil Purchasing Co., under Sinclair Consolidated Oil and Standard Oil Co., general office, 910 S. Michigan Ave., Chicago, Ill., let contract to Chicago Bridge & Iron Works, for fifty 80,000 bbl. tanks, fifteen tanks to be installed at Cushing, Okla., 15 to Hominy, Okla., 20 to Bristow, Okla.

S. C., Charleston—Consolidated Co. is constructing high pressure pumping main from gas works near Charlotte St. to Warren and Phillips Sta.; cost about \$25,000.

S. C., Pendleton—Pendleton Oil Mill, capital \$50,000, incptd. with E. N. Sitton, Prest.; Cema Chreditberg, Vl-P.; B. M. All, Secy.

Tex., Breckenridge—Breckenridge Gas Co., capital \$100,000, incptd. by J. B. Robert, C. N. Webb, G. C. Bateman.

Tex., Cross Plains—J. D. Ford of Brstown, Okla., reported interested in establishing oil refinery.

Tex., Dallas—Municipal Gas Co., changed name from North Texas Gas Co., increased capital to \$2,000,000.

Tex., Dallas—Barclay Petroleum Corp., reorganized with C. W. Boon, Prest., Tyler, Tex.; Geo. M. Harris, V.-P. and Gen. Mgr., Dallas; C. E. Martin, Secy. and Treas., 35 Wall St., New York; consolidation of Barclay and its subsidiaries, including Red River Leasing and Holding Co., Midland Petroleum Corp., Syndicate Petroleum Corp. of Texas, and Geo. M. Harris Syndicate, Magnolia Bldg., Texas; drilling 15 wells on Texas property; operating 75,000 acres in Del Rio field near Del Rio, Tex.; have large acreage in Caddo and Pine Island Field and

OPPORTUNITIES FOR NEW BUSINESS

THROUGH THE

DAILY BULLETIN

Manufacturers of Machinery and Equipment, Dealers in Railroad and Contractors' Supplies, as well as Architects, Contractors and Builders, find it very profitable to follow up the advance news furnished through our **DAILY BULLETIN** EVERY BUSINESS DAY IN THE YEAR. It is an authoritative, prompt source of information concerning every industrial and railroad undertaking of any consequence, and likewise all important building operations and municipal improvements in the whole South. The opportunity of getting in correspondence with firms that are in the market is afforded by a daily perusal of its columns.

MANUFACTURERS RECORD

BALTIMORE, MD.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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17,000 acres in Mexia field; operating offices in Magnolia Bldg., Dallas, Tex., home 35 Wall St., New York.

Tex., Fort Worth—Mook Texas Oil Co., capital \$60,000, incptd. by R. H. Mook, W. H. Hardy.

Tex., Galveston—Tank—Galveston Gas Co., P. E. Nicholls, Gen. Mgr., will expand \$125,000 for expansion and improvements to plant at 33rd and Market Sts.; gas tank 114 ft. in. diam.; 124 ft. high; storage capacity 750,000 cu. ft.; water tank, 2,100,000 gal. capacity; concrete reinforce with steel rods.

Tex., Graham—Young County Drilling Co., capital \$20,000, incptd. by C. R. Tyrell, W. H. Pattee, J. J. Mees.

Tex., Laredo—South Laredo Oil Co., capital \$100,000, incptd. by A. J. Landrum, W. M. Curry, P. Floyd.

Tex., Marlin—Deer Creek Oil Co., capital \$50,000, incptd. by R. F. L. Tomlinson, J. C. Fountain, W. R. Jones.

Tex., Morgan—Telegram Oil Co., capital \$30,000, incptd. by M. B. Wyreick, C. C. Martin, S. M. Martin.

Tex., Texas City—Swift Sure Oil Co., improving plant; installing 55,000 bbl. tank and centrifugal pump at pumping station.

Tex., Vernon—Heinzerling Oil Corp., capital \$30,000, incptd. by W. H. Heinzerling, J. B. Brady.

Tex., Wichita Falls—American Pipeline Co., organized by W. M. Priddy and others to construct pipeline from Walters, Okla. to Duncan, Okla.

Va., Newport News—Newport News and Hampton Railway Gas and Electric Co., C. D. Porter, V.P., increased capital to \$8,000,000.

W. Va., Charleston—Coast Oil Co., capital \$50,000, incptd. by J. O. and J. H. Myers, Charleston; A. M. Myers of Cabin Creek.

W. Va., Charleston—Frank E. Houston, Cincinnati, Jack Delton and A. B. Brode, Huntington, W. Va., organized company with \$500,000 capital; develop coal oil and gas lands in Kentucky.

Hydro-Electric Plants.

Fla., Tallahassee—West Florida Power Co., capital \$1,000,000, organized by B. H. Hardaway, Sr., B. H. Hardaway, C. A. Mees; develop hydro-electric power on Ocklocknee river.

Md., Oakland—Youghiogheny Power Co. and Youghiogheny Water & Electric Co., applied to Public Service Comsn., for permission to develop water power on Youghiogheny River near Oakland.

Tex., Robstown—for full details see Water Works.

Va., Newport—Page Power Co., capital \$300,000, incptd. with M. E. Roudabush, Prest. and Treas., Stanley; K. E. Roudabush, V.P.; A. A. Roudabush, Secy., Shenandoah; will install power plant on Shenandoah River nr. Luray; dam 500 ft. long; develop 1800 H.P.; furnish light and power to Elkhorn, Shenandoah, Stanley and Luray; contract for dam let to Ambusen Construction Co., 61 Broadway, N. Y.

Ice and Cold-Storage Plants.

D. C., Washington—Terminal Refrigerating & Warehousing Co., capital \$1,000,000, incptd. by James Trimble, John C. Eckloff and Chas. W. Warden.

Fla., Orlando—W. F. Blackman and others interested in establishing \$100,000 cold storage plant.

Ky., Louisville—American Freezer Co., capital \$25,000, incptd. by W. H. Graham, W. D. and A. B. Burton.

Tex., Beaumont—Texas Ice Co. increased capital to \$165,000.

Tex., Denison—Denison Crystal Ice Co., 117 E. Woodward St. let contract to W. H. Johnson and Chas. Schley, Denison, to erect 120x70-ft. plant; Geo. Wells, Archt., Boatman Bank Bldg., St. Louis, Mo.

Tex., Olney—Olney Ice Co., capital \$20,000, incptd. by W. B. Adams, R. R. Miller and D. C. McNeil.

W. Va., Logan—Logan Produce & Cold Storage Co., capital \$200,000, incptd. by LeRoy Webster, Logan; J. G. Cotton and Earl R. Roehm, Cincinnati, Ohio.

Irrigation.

Tex., Mercedes—American Rio Grande Land & Irrigation Co., W. F. Shaw, Gen. Mgr. contemplates irrigation development.

Land Developments.

Ala., Birmingham—Rock House Land Co., 1015 First National Bank Bldg., incptd. with Borden Burr, Prest.; O. G. Gresham, V.P.; develop 40 acres for residential site.

Fla., Altamont Springs—Royal Fern Corp., capital \$450,000, organized with Charles D. Haines, Prest.; James A. Coting, V.P.; George Klugsey, Secy.

Fla., Bartow—Hatton Bros., capital \$10,000, incptd. with T. T. Hatton, Prest.; R. C. Hatton, V.P.; E. B. Hatton, Secy.

Fla., Gainesville—Highland Realty & Investment Co., capital \$15,000, incptd. with M. Tucker, Prest.; James M. Parrish, V.P.; J. A. Phifer, Secy.

Fla., Lake Wales—Lake Wales Abstract Co., capital \$25,000, organized with Albert Treiber, Prest.; W. J. Andres, Secy.

Fla., Orange City—Orange City Mineral Springs Co., capital \$100,000, organized with L. B. Truesell, Prest.; A. B. Granger, V.P.; Gertrude L. Granger, Secy.

Fla., West Palm Beach—City, Karl Riddle, Mgr., will improve North Flagler Park and Pioneer Park; expend about \$30,000; Clark & De Gottreau, Contr.

Fla., West Palm Beach—Jupiter Investment Co., capital \$50,000, organized with B. J. Carlberg, Prest.; Geo. N. Hatch, V.P.; Harry C. Fugate, Secy.

Fla., West Palm Beach—North View Realty Co., capital \$5000, incptd. with Harry C. Fugate, Prest.; S. C. Kearley, V.P.; E. L. Baird, Secy.

Fla., West Palm Beach—L. E. Heisler, Porte Quinn of West Palm Beach, Carroll Duncomb, Stuart, Fla., have organized company and will develop 2300 acres in oranges, pineapples and grape fruit.

Fla., West Palm Beach—A. V. Brown Improvement Co., develop 180 acres on Loxahatchee River for homesite.

Ky., Louisville—F. L. Cook Co., incptd. by F. L. Cook, George C. Cannon, F. H. Miller.

La., New Orleans—New Orleans City Park Improvement Assn., Paul Chapdeville, Chrman., interested in acquiring 1200 acres for enlarging City Park.

Md., North East—Hance's Point Land Co., 15 E. Fayette St., Baltimore, capital \$25,000, incptd. by F. Guy Meyers, Harry F. Sieber, J. Herbert Miller; develop land at Hance's Point, Northeast.

N. C., High Point—Sunset Park, organized with Col. Wescott Roberson, Prest., capital \$50,000; have 90 acre site; develop for country club and golf course.

S. C., Columbia—H. E. Lindsay Co., incptd. with H. E. Lindsay, Prest.; Adam Lindsay, V.P.; Monroe Lindsay, Secy.

Va., Norfolk—City, Mr. Ashburner, Mgr., has \$49,770 appropriation for improvements

to Smith Creek and Lee Park.

Va., Norfolk—Old Colony Real Estate Corp., incptd. by W. B. Dougherty, Prest.; H. L. Dougherty, Secy.

W. Va., Huntington—Hill View Land Co., capital \$65,000, incptd. by R. M. Bates, M. J. Ferguson, Samuel Biern.

Lumber Manufacturing.

Ark., Pine Bluff—Saline River Hardwood Co., expend \$100,000 on remodeling plant; install additional mech.

La., New Orleans—Delta Lumber Co., M. L. Rhodes, Prest., plans rebuilding planing mill, supervised by owner. (Lately noted burned.)

Miss., Corinth—Corinth Saw Mills, purchased timber tract in Lime Creek bottoms, develop.

Miss., Jackson—Fetterman Lumber & Mfg. Co., capital \$15,000, incptd. by W. C. Wells, J. L. and E. V. Fetterman.

N. C., Gibsonville—O. W. Mann Lumber Co., capital \$25,000, incptd. by O. W. Mann, D. M. Davidson and J. W. Burke.

Tenn., Nashville—Farris Hardwood Lumber Co., rebuild saw mill; burned at loss of \$40,000.

Tenn., Memphis—A. J. Chestnut Co., capital \$200,000, incptd. by Mitchell Long, Chas. H. Smith and E. J. Williams.

Tenn., Nashville—W. R. Cornelius Lumber Co., capital \$25,000, incptd. by W. R. Cornelius, R. J. Woods and W. W. Gambill, Jr.

Metal-Working Plants.

Miss., Vicksburg—Electrolock—Electrolock Mfg. Co., capital \$100,000, incptd. by W. Hemingway, Jr., W. L. Jacquot and others.

Tex., Dallas—Fence and Wire—Columbia Fence and Wire Co., capital \$25,000, incptd. by B. J. Ryan, D. B. Fielder, S. J. Smyth.

Tex., San Antonio—Deems Tractor Hitch Co., capital \$31,000, incptd. by T. F. Roberts, Ezra Reust and C. O. Deems.

Mining.

Ala., Fort Payne—Clay, etc.—Clay Products & Mining Corp., 150 E. State St., Trenton, N. J., organized with R. M. J. Smith, Prest.; Alfred L. Eccles, Secy.; develop 180 acres clay and kaolin, 1000 acres coal. (Lately noted incptd., capital \$1,500,000.)

Fla., Williston—Shelby Rock—Florida Shell Rock Co., capital \$25,000, incptd. with Baxter Morrison, Prest.; E. R. Osborne, Secy. Treas.

Ga., Augusta—Sand and Gravel—Georgia Sand & Gravel Co., organized with E. W. Hancock, Mgr.; contemplate enlarging plant, present daily capacity 500 tons washed sand and gravel. (Lately noted incptd., capital \$50,000.)

N. C., Baldwin—Soapstone—National Soapstone Co., C. R. Williams, Mgr., Roanoke, Va., let contract to Virginia Bridge & Iron Co., Roanoke, to erect 60x116-ft., 30x60-ft. and 30x45-ft. factory buildings, steel construction; \$9000; install quarry and stone working mech., partially awarded; Geo. W. Hutchinson, Engr., Roanoke. (Lately noted.)

Okl., Tulsa—Gold, etc.—Johnston County Gold Mining & Development Co., capital \$300,000, incptd. by J. D. Judy and John L. Phillips, both Tulsa; E. S. Weston, Troy, Okla.

Tenn., Knoxville—Marble—Gray Eagle Marble Mills (Gray Eagle Quarries) let contract to Converse Bridge & Steel Co., to erect 125x160-ft. plant for mfrs. and finish of marble, steel and concrete construction, \$30,000 to \$35,000; Chas. L. Lawhon, Archt.

Va., Bristol—Feldspar, etc.—Clinchfield Sand & Feldspar Corp., capital \$600,000, chartered with Henry N. Hanna, Prest., 206

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Water St., Baltimore; George M. Warren, Secy., Bristol.

Miscellaneous Construction.

Ala., Riverview—Coal Terminal—Daniel Duffey Coal Co., Birmingham, Ala., negotiating with City Comms. to establish coal terminal at municipal wharf; reported.

Fla., Jacksonville—Intercoastal Waterway—Major William C. Lemon, U. S. Corp., Dist. Engr., interested in intercoastal waterway from Jacksonville to Miami, surveys being made and discussed.

Fla., Sarasota—Pier—City, E. J. Bacon, will construct municipal pier, solid concrete wall filled in and paved, \$75,000; bids open July 10; Leon Pickett, Engr. Lately noted. (See Mchly. Wanted—Pier.)

Md., Baltimore—For full details see Mchly. Wanted—Wall Construction.

Miss., Clarksdale—Levee—R. T. Clarke, Vicksburg, Miss., received contract to construct levee around Devil's Hole.

Miss., Parchman—Canal, etc.—Board of Penitentiary Trustees, let contract to Canal Construction Co., Memphis, Tenn. to excavate Black Bayou making drainage canal for Parchman farm, reclaim about 4000 acres; \$30,000 available; E. L. Fontaine, Constl. Engr., Clarksdale, Miss.

Mo., Kansas City—Aerodrome—Flying Club, reported to announce plans for construction of aerodrome; 53 acres field to be leased to government, operated under supervision of air service officers; tentative plans include hangars, garages and machine shop, motor car parking space, grandstand, 5000 capacity, clubhouse, space for aviation school and quarters for civilian flying school, barracks, etc.; Major Howard F. Wehrle, interested.

N. C., Murphy—Heating Plant—Cherokee County Comms., A. Rice, Chrmn., install steam heating plant in county court house; bids until July 5. (See Mchly. Wanted—Heating Plant.)

Tenn., Memphis—Elevator—Standard Rice Co., W. K. Morrow, Prest., Houston, Tex., erect 100,000 bu. capacity elevator; invite bids on construction and mchly. (See Mchly. Wanted—Elevator Machinery.)

Miscellaneous Enterprises.

Ala., Montgomery—Undertaking—McCarty Spruell Undertaking Co., capital \$15,000, incptd. with T. J. McCarty, Prest.; S. P. Spruell, Treas.

Fla., Jacksonville—Construction—Bauman Construction Co., capital \$10,000, incptd. with C. G. Odom, Prest.; B. B. Shields, Secy.-Treas.

Fla., Jacksonville—Electrical—Peninsular Electric Co., capital \$25,000, incptd. with N. M. Powell, Prest.-Treas.; H. Holzhey, Secy.-Treas.

Fla., Miami—Construction—Miramar Properties, capital \$100,000, incptd. with C. H. Pfunder, Prest.; C. W. Horn, Secy.-Treas.

Fla., Moore Haven—Printing—Glades Printing Co., capital \$10,000, incptd. with R. L. Helvenston, Prest.-Gen. Mgr.; W. E. Daniel, Secy.-Treas.

Fla., Vero—Printing—Press Printing Co., capital \$20,000, incptd. with A. M. Hill, Prest.; Jos. Hill, Secy.

Ga., Savannah—Abattoir—City, reported to lease plant of Savannah Abattoir Co., will operate. Address The Mayor.

Ky., Bowling Green—Tavern—Lost River Tavern Co., capital \$10,000, incptd. by H. L. Underwood, M. H. Crump and T. P. Tiby.

Ky., Corbin—Advertising—Wilder Poster Advertising Service Co., incptd. by J. F. J.

Arthur and L. M. Wilder.

Ky., Louisville—Plumbing, etc.—Nichols Plumbing & Heating Co., capital \$25,000, incptd. by Robert S. Nichols, Geo. A. Schmitt and J. H. Scales.

La., Monroe—Construction—Monroe Building Co., incptd. with P. M. Atkins, Prest.; Travis Oliver, Secy.-Treas.

Md., Baltimore—Dry Cleaning—Maryland Dry Cleaning Works, Aaron M. Jacob, 1923 Vine St., will erect fire-proof building, open bids June 23; install boiler, washers, tumblers, pressing machines and rug machines, etc. for dry cleaning and dyeing garments, household furnishings, and rug cleaning; \$20,000. (See Mchly. Wanted—Dyeing (Rug) and Cleaning Equipment; etc.)

Md., Baltimore—Engineering—Northern Engineering Co., capital \$100,000, incptd. by Daniel Shipley, 104 W. 36th St., Joseph S. Small and E. Ray Lowe.

Md., Cumberland—Electrical Supplies—Electric Appliance Co., capital \$40,000, incptd. by Leo T. Lawler, William C. Devonon and Martin L. Cole.

N. C., Asheville—Cab Service—Yellow Cab Co., capital \$50,000, incptd. with Edwin Allen, Gen. Mgr.

N. C., Charlotte—Storage, etc.—Carolina Transfer & Storage Co., capital \$50,000, incptd. by W. D. J. L. and F. A. Wilkinson.

N. C., Charlotte—Contracting—Carolina Road Service Co., capital \$10,000, incptd. by E. H. Tarrant, W. E. Sloan and A. R. Brodin.

N. C., Greensboro—Incinerator—City, Claude Kiser, Mayor, let contract to Nye Odorless Crematory Co., Macon, Ga. to erect incinerator, \$20,000; has site.

N. C., Oxford—Publishing—Oxford Public Ledger, plans to erect 2 story brick building on Littlejohn St.; Marvin Minor, Archt.

N. C., Wilson—Builders Supplies—Carolina Builders' Supply Co., capital \$250,000, incptd. by S. E. Ballentine, D. J. Rose, both Rocky Mount, N. C.; T. B. Ward, Wilson.

N. C., Wilson—Construction—Wilson Building & Construction Co., capital \$25,000, incptd. by W. A. Crawford, D. Fox and C. N. Turner.

Okla., Tulsa—Mineral Water—Fountain Water Co., capital \$20,000, incptd. by D. S. Halley, J. T. Bradley, Jr. and E. B. Cole.

S. C., Sumter—Abattoir—City let contract to G. P. Knowles to construct municipal abattoir.

Tenn., Athens—Laundry—John Martin & Son, Charleston, Tenn., establish laundry; building to be erected by Tom Sherman.

Tenn., Buffalo Valley—Dairy—McKinley Pure Milk Co., capital \$10,000, incptd. by J. C. and M. N. McKinley, H. B. Maddux.

Tenn., Knoxville—Construction—Holston Construction Co., capital \$10,000, incptd. by A. H. Johnson, George W. Walters and W. B. McGill.

Tex., Abilene—Plumbing Supplies—Franklin Plumbing Supply Co., capital \$35,000, incptd. by R. E., A. R. and J. M. Franklin.

Tex., Clarksville—Incinerator—for full details see Water Works.

Tex., Dallas—Transportation—Dallas Baggage & Cab Co., capital \$20,000, incptd. by Heber Page, S. T. Morgan and Hart Willis.

Tex., San Antonio—Publishing—Herbert S. Green, Archt., invite bids until June 29 for painting, iron work, plastering and plumbing on San Antonio Express and Evening News Bldg.

Va., Hopewell—Cleaning and Dyeing—Crutchfield's, Petersburg, Va., establish plant for cleaning, dyeing and laundry work.

Va., Norfolk—Printing—Federal Directory

Corp., chartered with Thomas H. Lasy, Prest.; Michael J. Cacace, Secy.

Va., Portsmouth—Hotel—American Hotel Corp., capital \$25,000, chartered with Abe Levitin, Prest.; W. T. Eastwood, Secy.

Va., Richmond—Publishing—News-Leader Publishing Co., John Stewart Bryan, Prest., 9 N. 8th St., erect 5 story, 72x100-ft. newspaper plant on 4th St.; Baskerville & Lambert, Archts., Travelers Bldg.

Va., Suffolk—Amusements—Greater Four County Fair Corp., chartered with G. G. Combs, Prest.; L. P. Jordan, Secy.

Miscellaneous Factories.

Ala., Gadsden—Overalls—United Overall Co., Chattanooga, Tenn., acquired plant of North Alabama Mfg. Co., Gadsden, and Stewart Overall factory, at Chattanooga, will consolidate, operating at Gadsden; output 1000 pairs, weekly.

D. C., Washington—Battery—Hooray Battery Co., capital \$100,000, incptd. by Edw. A. Hines, Takoma Park, Md., Louis A. Miller, Harry D. Tong, both of Washington.

Fla., Jacksonville—Fruit Syrup, etc.—Florida Bottlers Co., capital \$50,000, organized with H. F. Bixby, Prest.; Lillian M. Allardice, V.-P.; F. B. Allardice, Secy.

Fla., Jacksonville—Oil and Bi-Products—Baker Refining & Mfg. Co., capital \$10,000, organized with A. H. Baker, Jr., Prest.; J. T. Myers, V.-P.; H. T. Miller, Secy.

Fla., Palatka—Ice Cream—Palatka Ice Cream Co., capital \$5000, organized with A. E. Drew, Prest.; W. C. Alband, V.-P.; W. M. Enos, Secy.

Fla., St. Petersburg—Cigars—Pinellas Cigar Co., capital \$25,000, organized with Edward Durant, Prest.; Eli Witt, V.-P.; D. H. Woodberry, Secy.

Kentucky—Carbon Black, etc.—Associates Coal & Gas Co., capital \$500,000, incptd. by A. Jack Dalton and A. B. Brode, Huntington, W. Va.; Frank E. Houston, Cincinnati; J. Tracey Walker, Bluefield, W. Va., refine gasoline from natural gas and carbon black; develop 40,000 acres oil and gas in Kentucky.

Ky., Horse Cave—Creamery—W. A. McGuire interested in erection of creamery; receiving bids for equipment. (See Mchly. Wanted—Creamery Equipment.)

Ky., Louisville—Batteries—Hunter-Klefer Co., increased capital to \$20,000.

Ky., Louisville—Radio—Central Radio Co., capital \$12,180, incptd. by Samuel B. Kirby, Wm. K. Gregory, Jas. P. Gregory.

Ky., Louisville—Chemical—Kentucky Carbon & Chemical Co., capital \$50,000, incptd. by Harry Reid of Indianapolis, Ind., Robt. G. Gordon, Owlsley Brown.

Ky., Owensboro—Wall Plaster—Owensboro Wall Plaster Co., capital \$5000, incptd. by W. L. and E. H. Delker, both of Henderson, Ky., J. T. Harrison and P. A. Yager of Owensboro.

Ky., Shelbyville—Monuments—Shelbyville Monument Co., capital \$10,000, incptd. by C. E. and Lon Keith, M. E. Lee.

La., Lakeland—Sugar—Lorio Sugars, Inc., capital \$20,000, chartered with A. A. Lorio, Prest.; Dr. L. F. Lorio, V.-P.; W. A. Lorio, Secy.-Treas.; develop sugar cane tract; establish refinery.

Md., Baltimore—Creamery—Moon Girl Creameries, Maurice B. Hurwitz, Prest.; 5-7 W. Lombard St., will enlarge plant.

Md., Hagerstown—Fuel, etc.—Oakalo Mfg. Co., capital \$10,000, incptd. by Geo. H. Stevenson, James L. Ballard, Irving Whitehead.

Md., Manchester—Cigars—Waretheimer

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Bros. Cigar Co., 1807 E. Preston St., Baltimore, purchased plant of Masonheimer Cigar Co.; operate.

Mo., Monett—Overalls—Monett Overall Mfg. Co., will install additional machinery.

Mo., St. Louis—Envelopes—Hesse Envelope & Lithographing Co., 501 N. First St., Eugene H. Barnes, Prest., will erect plant approx. 60,000 sq. ft.; fireproof; daily output 1,000,000 envelopes; cost about \$150,000. (Later noted.)

Mo., St. Louis—Shoes—Boyd-Welsh Shoe Co., John C. Boyd, Prest., increased capital to \$1,000,000.

N. C., Asheville—Coffee—Southern Coffee Co., capital \$50,000, incptd. by A. E. Buckner, A. G. White, G. S. Stewart.

Okl., Oklahoma City—Brooms—Critts Broom Co., E. J. Critts, Mgr., 1900 W. Main St., will erect brick factory.

Tenn., Dyersburg—Cigars—Chamber of Commerce, H. R. Merleweather, Secy., let contract to S. N. Bilven, to erect building to be occupied by American Cigar Co.; 60x120 ft.; 2 story brick; mill construction; electric.

Tenn., Lexington—Bottling—Lexington Lime Cola Bottling Co., lately noted incptd. with \$5000 capital, organized with A. S. Montgomery, Prest.; D. G. Hellams, Secy.; A. S. Montgomery, Mgr.; has plant for mfrs. of lime cola and soda waters. (See Mchly. Wanted—Bottles; Etc.; Extracts.)

Tenn., Memphis—Novelty—Memphis Novelty Corp., capital \$10,000, incptd. by Wm. J. Bacon, W. T. McLain, E. G. Draper.

Tenn., Rogersville—Creamery—Hawkins County Creamery, capital \$20,000, incptd. by W. D. Kenner, K. B. Waterman, F. F. Hale.

Tex., El Campo—H. P. Fisher of Provident City, Tex., establish broom plant.

Tex., El Paso—Boots and Shoes—M. V. Starnes Boot & Shoe Co., capital \$30,000, incptd. by M. V. Starnes, G. A. Starnes, R. F. Pedan.

Tex., Fort Worth—Bakery—Schaeffer Bakery, capital \$40,000, incptd. by M. J. Schaeffer, G. R. Schaeffer, J. S. O'Connell.

Tex., Fort Worth—Chemical—Kleenit Chemical Co., capital \$5000, incptd. by L. D. Patterson, L. W. Bevans, T. B. Yarborough.

Tex., Fort Worth—Clothing—Jenkins Mfg. Co., capital \$10,000, incptd. by P. Jenkins, S. Jenkins, R. Jenkins.

Tex., Houston—Asbestos—Rogers Asbestos Co., capital \$40,000, incptd. by E. M. Rogers, W. W. Bates, S. H. Rudnick.

Va., Lebanon—Drugs—Lebanon Drug Co., capital \$25,000, incptd. with Clarence C. Burns, Prest.; C. H. Jennings, Secy.

Va., Norfolk—Sugar Refinery—W. A. Cox, Chamber of Commerce, reported interested in establishment of sugar refinery.

W. Va., Shinnston—Glass—Alley Glass Co., capital \$10,000, incptd. by L. E. Alley, Paul E. Tetrick, E. A. Allen.

MOTOR CARS, GARAGES, TIRES, ETC.

Ala., Birmingham—Garage—S. J. Brinle let contract to M. C. Banks to erect brick garage on 25th St., \$15,250.

Fla., Miami—Motors—H. R. Chase Motor Co., capital \$60,000, incptd. with W. T. Carter, Prest.-Treas.; H. R. Chase, Secy.-Gen. Mgr.

Ky., Glasgow—Motors—Brice Leech Motor Co., capital \$15,000, incptd. by Brice Leech, L. M. and H. L. Goodman.

Ky., Louisville—Automobile Parts—Saylor Auto Parts Co., increased capital to \$20,000.

Ky., Louisville—Bennett & Murphy Motor Co., capital \$10,000, incptd. by James Bennett, Joseph A. Murphy, Richard K. Fowler.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

La., Lake Charles—Automobiles—Moss & Watkins, 314 Broad St., capital \$40,000, incptd. with A. H. Moss, Prest.; H. Moss Watkins, Secy.-Treas.

Md., Baltimore—Filling Station—Republic Gasoline Corp., 308 Marine Bank Bldg., Incptd. by Geo. I. Stafford, C. Ross Rishel, Arthur B. Connelly.

Md., Baltimore—Filling Station—Salisbury Uniform Oil Co., N. C. Cor. 11th and E. Fayette St., capital \$20,000, incptd. by Wm. J. Braid, Charles R. Megenhhardt, Oscar D. Green.

Mo., Carthage—Automobile Parts—Auto Parts Co., Harley C. Beard, Secy.-Treas., establish auto accessories plant. (See Mchly. Wanted—Automobile Accessories.)

N. C., Charlotte—Service Station—Hanes Tire & Service Co., J. Caldwell McDonald, Mgr., let contract to Blythe & Isenhour to erect addition for tire repair dept.

N. C., Charlotte—Motors—Charles E. Lambeth Motor Co., capital \$30,000, incptd. by C. E. and J. A. Lambeth, E. T. Causler, Jr.

S. C., Brookland, P. O. New Brookland—Motors—Riggs Motor Co., incptd. with M. M. Riggs, Prest.-Treas.; E. M. Riggs, Secy.

S. C., Charleston—Motors—Charleston-Anderson Motor Co., capital \$15,000, incptd. with G. Abbott Middleton, Prest.; H. Lewis Tupper, Treas.

Tenn., Chattanooga—Automobiles—U-Drive It System of America, capital \$1,000,000, incptd. by Ben Taylor, M. N. Whitaker and N. E. Carson.

Tenn., Dresden—Filling Station—Doyle Brooks and others organize company to establish station for gasoline, coal oil and lubricating oils, etc.

Tex., Austin—Drugs—Renfro Drug Co., capital \$25,000, incptd. by J. F. and E. T. Renfro, Eldridge Moore.

Tex., Austin—Automobile Accessories—Charlton & Crockett Co., capital \$10,000, incptd. by Marvin, M. Undine and B. Charlton.

Tex., Belton—Motors—Belton Motor Co., capital \$30,000, incptd. by J. B. Love, Roy Sanderford and W. C. Campbell.

Tex., Dallas—Tires—English Bros. will occupy 50x100-ft. brick building at Young and Evergreen Sts.; erected by D. S. Furman.

Tex., Fort Worth—Motors—Smith-Southern Motor Co., capital \$10,000, incptd. by Marc B. Jules, G. Smith and R. E. Southern.

Va., Norfolk—Garage—Lowenberg-Goodman Corp., 127 Granby St., let contract to Johnson Construction Co., Law Bldg., to erect 91x305-ft. brick and concrete garage.

Va., Norfolk—Motors—Doherty Motor Co., capital \$50,000, incptd. with J. E. Doherty, Prest.; D. M. Biggs, Secy.

Va., Norfolk—Garage—Elliott & Cobb, Washington St., let contract to W. W. Thompson, Dickson Bldg. to erect \$60,000 garage; P. Breeden, Archt., Suffolk, Va.

W. Va., Beckley—Motors—Harper Motor Co., capital \$25,000, incptd. by J. P. Harper, D. G. Dupuy and G. W. Moss.

W. Va., Clarksburg—Automobile Accessories—George A. Denham Co., capital \$50,000, incptd. by George A. Denham, 230 Maple Ave., E. H. Dallas and Charles W. Louichory.

Railway Shops, Terminals, Round-houses, Etc.

Md., Hagerstown—Pennsylvania R. R. A. C. Shand, Chief Engr., Philadelphia, Pa. and Norfolk and Western Ry. Co., J. E. Crawford, Chief Engr., Roanoke, Va., let contract to W. W. Boxley, Roanoke, Va. to erect railroad terminal; \$250,000.

Railways.

Tex., Byers—Construction of the extension of the Wichita Falls & Oklahoma Railway from Byers, Tex., to Waurika, Okla., 13 mi. will be let to contract on June 27, according to a report from Wichita Falls, Tex., quoting Frank Kell, and it is understood work will begin by July 1.

Road and Street Construction.

Alabama—State Highway Dept., Montgomery, Ala., construct 3 roads. For full detail see Mchly. Wanted—Road Construction.

Ala., Mobile—Mobile County Board of Revenue and Road Commr., authorized hard surfacing Alba, Arlington, O'Donnell, Choctaw and Cottrell Sts., in Oakdale.

Ala., Tuskegee—State Highway Comrn., Montgomery, Ala. For full detail see Mchly. Wanted—Road Construction.

Ark., Fort Smith—City plans constructing 55,000 sq. yds paving in Garrison Ave. Pav-ing Dist.; concrete, asphalt or brick; W. L. Winters, Engr.

Ark., Jonesboro—City, Improvement Dist. No. 28, let contract to Kaw Paving Co., Topeka, Kans., at \$32,000, to asphalt Main and Union Sts.; Guy W. Cobb, Engr.

Ark., Little Rock—City. For full detail see Mchly. Wanted—Paving.

Ark., Little Rock—City, Board of Commr. Improvement Dist. No. 312, pave Court St. from Markham St. to Lee Ave.; asphalt, asphalitic concrete, sheet asphalt, Warrenite or plain concrete, with necessary curb and adjoining sidewalks; 3588 sq. yds. pavement; 2860 lin. ft. curb; 14,000 sq. ft. sidewalk; bids opened June 21; Jas. H. Rice, Engr.

Fla., Clearwater—City. For full detail see Mchly. Wanted—Paving.

Fla., West Palm Beach—Palm Beach County Commr.—For full detail see Mchly. Wanted—Road Construction.

Fla., Arcadia—De Soto County will build State Road No. 2 from Hardee to Charlotte Counties; and State Road No. 7 from Highlands County to Manatee County; vote July 10 on \$500,000 bonds.

Fla., DeLand—State Road Dept., H. B. Phillips, Chairman, Tallahassee, Fla., let contract to Maule Paving Co., Ojus, Fla., to hard surface 18 mi. road in Volusia County, between Deleon Springs and Putnam County line.

Fla., Tallahassee—City plans repaving College Ave. from Adams St. to College entrance; brick. Address City Mgr.

Fla., Tampa—Hillsborough County Commr., construct 180 mi. new highways; voted \$3,000,000 bonds.

Fla., West Palm Beach—City let contracts for street paving as follows: for section A, to Greynolds & Monroe, at \$22,864.02; Section C, to Keystone Constr. Co., at \$22,754.38; Sections B and D, to Maule Paving Co., at \$23,198.70, for former and \$27,928.96 latter. Address Mayor Biggers.

Fla., West Palm Beach—City, Karl Riddle, Mgr., improve Paving Dist. No. 2; 49,262 sq. yds. rock; 2740 sq. yds. concrete; 16,977 lin. ft. concrete curb and gutter; 49,262 sq. yds. oiling; H. C. Fugate Engineering Co., Engr.; bids opened June 20.

Fla., Dahlonega—State Highway Comrn., John H. Holder, Chrmn., Augusta, Ga., plans constructing highway in Toccoa basin, between Dahlonega and Blue Ridge; \$40,000 available.

Ky., Ashland—City. For full detail see Mchly. Wanted—Paving.

Ky., Carrollton—State Highway Dept., Frankfort and Carroll, Trimble, Henry and

June 29, 1922.

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Shelby Counties plan constructing road between Carrollton and Shelbyville; \$140,000; State to pay 60%, and counties 40%.

Ky., Louisville—City, Board of Public Works, let contracts for constructing 27 alleys as follows: To J. H. Koch & Sons, for 13 alleys; Henry Bickel & Co., 6 alleys; L. R. Figg Co., 3 alleys; K. A. Barker, 5 alleys; also to J. U. Schickl & Brothers, at \$8624, to pave with concrete, 6700 sq. ft. on levee near 2nd St.

Ky., Paintsville—Johnson County plans paving road from country bridge at Peat Ck. to depot; 22-ft. wide; brick with curb gutter; \$20,000; county pay 1/3; railroad 1/3 and city 1/3. Address County Commsr.

La., Alexander—City. For full detail see Mchly. Wanted—Paving.

La., Convent—Louisiana Highway Comsn., Raymond Bldg., Baton Rouge, La., construct 3 highways. For full detail see Mchly. Wanted—Road Construction.

La., Many—Sabine Parish Police Jury construct hard surface roads through parish; vote July 25 on bonds.

La., Mansfield—De Soto Parish Police Jury plans constructing State Highway from Lo-gansport to connect with highway being built at Tenaha.

La., Monroe—City. For full detail see Mchly. Wanted—Paving.

Maryland—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md., construct 5 roads. For full detail see Mchly. Wanted—Road Construction.

Md., Baltimore—City. For full detail see Mchly. Wanted—Paving.

Md., Baltimore—City, Board of Awards, Wm. F. Broening, Prest., lay sheet asphalt pavement on Springdale Ave., from Hamilton Ave. to Hillsdale, Forest Park section.

Md., Baltimore—City. For full detail see Mchly. Wanted—Paving.

Md., Baltimore—City, Board of Awards, Wm. F. Broening, Prest., will pave following: Baltimore, Gough, Clinton, Eastern Aves.; sheet asphalt; low bidder, American Paving & Contr. Co., Montebello, at \$150,858; Cedar Ave., Ellicott Driveway, Lakeside Ave., Payson St., Springfield Ave., Dennis, 1st, Lyndhurst, Grantley Sts., Walnut, Park Heights Aves., etc.; sheet asphalt; low bidder, P. Flanigan & Sons, 2600 Hartford road at \$96,600; Little Stockton St. and Tiffany Al.; cement concrete; to Leonard-Apiceo & Leonard, at \$15,089; also let contracts to Dominic Catalano, 265 East St., at \$14,803.50, 6468.74 and \$7720, respectively, to grade and pave footways; to Aiello Construction Co., Knickerbocker Bldg., at \$4750, to grade and pave footway.

Md., Baltimore—City, Board of Awards, Wm. F. Broening, Prest., let contract to McLean Contr. Co., Fidelity Bldg., at \$87,000, for 558-ft. Phoenix Bridge and approaches across Gunpowder River.

Md., Easton—Town let contract to Chas. W. Sigman, for 3000 ft. concrete curb and gutter; E. G. Kastenhuber, Jr., Engr. Address The Mayor.

Miss., Jackson—Hinds County Board of Supvrs. For full detail see Mchly. Wanted—Road Construction.

Miss., Oxford—Lafayette County, Board of Supvrs. For full detail see Mchly. Wanted—Road Construction.

Miss., Vicksburg—Warren County Board of Supvrs. For full detail see Mchly. Wanted—Road Construction.

Missouri—State Highway Dept., Jefferson City, Mo., construct 2 roads. For full detail see Mchly. Wanted—Road Construction.

Mo., Bethany—City plans paving various

streets and alleys; E. C. L. Wagner, Asst. City Engr., Kansas City, Mo. Address The Mayor.

Mo., Carrollton—Carroll County Court let contract to A. L. Cook, Ottawa, Kansas, at \$30,000, to grade and construct concrete culverts on State road near Norborne.

Mo., Carthage—City plans paving Clinton St.; let contract soon. Address The Mayor.

Mo., Fredericktown—State Highway Pept., Jefferson City, Mo., let contract to Dick H. Hogan, Little Rock, Ark., at \$210,000, for 6½ mi. State Highway between Fredericktown and Coldwater; gravel surface; grade and construct drainage structures.

Mo., Greenfield—State Highway Dept., Jefferson City, Mo., let contract to A.T. Bramer & Son, Monet, Mo., at \$27,427.04, for road between Greenfield and Everton.

Mo., Jefferson City—City. For full detail see Mchly. Wanted—Paving.

Mo., Kansas City—City, Board of Public Works, let contracts to W. H. Knight Construction Co., as follows: 24,795 sq. yds. rock asphalt pavement on Prospect Ave., from terminal viaduct to 31st St., at \$90,997.65; 9170 sq. yds. sheet asphalt pavement on Prospect Ave., from 35th to 39th Sts., at \$34,020.70; 2289 sq. yds. asphaltic concrete pavement on 8th St., from McGee to Cherry Sts., at \$8171.73; to W. C. Mullins Construction Co., at \$5844.83, for 2621 sq. yds. plain concrete pavement on Bales Ave.

Mo., Trenton—City, will pave 6 streets with reinforced concrete; bids opened. Address The Mayor.

Mo., Warrenton—Warren County Court plans grading and constructing culverts on Marthasville road; \$17,625.63; Fred Jacoby, County Highway Engr.

Mo., Weston—City, Board of Alderman plans paving Spring and Walnut Sts.; concrete.

N. C., Burlington—City. For full detail see Mchly. Wanted—Paving.

N. C., Chadbourne—For full details see Water Works.

N. C., Greenville—Pitt County plans constructing hard surfaced road between Moccasin River at Grifton and Ayden. Address County Commsr.

N. C., Lumberton—North Carolina State Highway Comsn., Raleigh, N. C., construct 10 mi. concrete highway between Maxton and Lumberton, on Wilmington-Charlotte-Asheville road; W. A. McGirt, 3rd, Dist., Highway Commr.

N. C., New Bern—Craven County Commsr., surface with small rock, 8 mi. road between Clark and Dover.

N. C., Reidsville—City, Edw. Wrenn, Mgr., let contract to Elliott & Sons, Spartanburg, S. C., for pavement; and Atlantic Bitulithic Co., Richmond, Va., for street paving; total cost \$200,000.

N. C., Rockingham—North Carolina State Highway Comsn., Raleigh, N. C. For full detail see Mchly. Wanted—Road Construction.

N. C., Winston-Salem—Forsyth County Highway Comsn. For full detail see Mchly. Wanted—Road Construction.

Okla., Ada—City let contract to pave 8 blocks on S. Townsend Ave., and 1 block on W. 16th St. Address The Mayor.

Okla., Fort Cobb—Town will construct hard surface roads in Caddo County; voted \$40,000 bonds. Address The Mayor.

Okla., Madill—Marshall County Commsr., Earl E. Ayers, Clk., will construct 65 mi. hard surface roads in County; voted \$350,000 bonds.

Okla., Muskogee—State Highway Comsn., Oklahoma City, Okla. For full detail see Mchly. Wanted—Road Construction.

Okla., Perry—City, F. F. Busch, Clk., let contract at \$136,000, to pave 22 blocks; concrete.

S. C., Abbeville—Abbeville County, construct road from Reeds Bridge on General's road to Saylor's Cross Road, via Ebenezer Church. Address County Commsr.

S. C., Abbeville—Abbeville County Highway Commsr., J. S. Stark, Chrmn., let contracts for following:

6 1/2 mi. top-soil Island Ford road, from near Golman's Gin to McCormick County line; clear, grub, construct culverts, head-walls, etc.; to Friday & Son, Newberry, S. C., at \$12,351.10.

Latimer road, to W. C. Hill, Abbeville, at \$18,749.28.

S. C., Anderson—Anderson County Highway Comsn., construct 5 mi. Dobbins Bridge road from Carey Chamblee's.

S. C., Camden—City. For full detail see Mchly. Wanted—Paving.

S. C., Camden—City, plans paving Broad and DeKalb Sts.; voted \$200,000 bonds. Address The Mayor.

S. C., Greenwood—State Highway Dept., Columbia, S. C., hard surface 5 mi. Greenwood-Abbeville Highway from Greenwood to Abbeville County line; bids until July 18.

S. C., Hampton—State Highway Dept., Columbia, S. C., construct 15.6 mi. road from city limits of Varnville to Yemassee; low bidder, Morrison & Glover, Augusta, Ga., at \$51,276.72.

S. C., Marion—City let contract to Adams, Evans & Co., Jacksonville, Fla., to pave 1 mi. road with sheet asphalt and 5-in. concrete base, and 8 mi. sidewalk; Johnson & Roberts, Supvr. Engrs. Address The Mayor.

S. C., Spartanburg—City plans widening S. Church St. between Broad and Henry Sts. Address The Mayor.

S. C., Union—City. For full detail see Mchly. Wanted—Paving.

Tenn., Athens—City plans paving certain streets to connect with Lee Highway.

Tenn., Jacksboro—Campbell County Highway Commsr., Jesse L. Rogers, Chrmn., let contracts for following projects:

No. 1, grade 7 mi. Jacksboro Pike to Anderson County line; to Parrott & Bartley, Lafollette, Tenn., Route 1, at \$20,000.

No. 4, grade about 3 mi. from Lindsay's bridge over Cove Creek to Anderson County line; to R. S. Freeman & Co., Knoxville, Tenn., at \$10,000.

No. 5, grade and construct bridges on 8 mi. road from Red Ash to Pioneer; to R. S. Freeman & Co., Knoxville, Tenn., at \$52,000.

No. 6, macadam 6 mi. from Elks Valley to Pioneer, to R. S. Freeman & Co., Knoxville, Tenn., at \$20,000.

No. 7, grade 3 mi. from Neeley's Store to Powell's River; to Parrett & Dossett, Route 1, Lafollette, Tenn., at \$10,000.

No. 8, grade 2 mi. from Flat Hollow to Claiborne County line; to O. T. Claiborne, Speedwell, Tenn., at \$6000.

No. 9, grade and re-surface 10 mi. from Lafollette to Claiborne County line; to R. S. Freeman & Co., Knoxville, Tenn., at \$50,00.

No. 10, grade 3 mi. from Dick Disney's to Cove Creek; to R. S. Freeman & Co., Knoxville, at \$10,000.

No. 20, grade 1 1/2 mi. from Lafollette to Pleasant Ridge; to S. H. Rogers, Lafollette, at \$5000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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No. 21, grade 1½ mi. from Lafollette to Gross' Mill; to S. H. Rogers, Lafollette, at \$5000.

No. 22, grade 1½ mi. from R. H. Sharps to Cedar Creek road; to S. F. Rogers, Lafollette, at \$5000. (See Mch. Wanted—Road Oiling Equipment.)

Tenn., Jackson—City, Paul M. Wilson, Commr. Streets, construct concrete curb and gutters on East Chester, W. Poplar, Neeley, Middletown, College Sts., and Talbot, Middle, Allen and Gates Aves.; Ordinances Nos. 87 to 109, inclusive; 60,000 lin. ft.; bids opened June 20.

Tenn., Manchester—Coffee County construct following highways:

From Moore County line, through Tullahoma and Manchester, to Warren County line.

From Beech Grove, or Rutherford County line, through Manchester and Hillsboro, to Grundy County line; voted \$600,000 bonds. Address County Commsr.

Tenn., Woodbury—State Highway Dept., Nashville, Tenn., let contract to Boyd Williams, Murfreesboro, at \$160,903.67, for 6.6 mi. road in Cannon County, from Woodbury to Rutherford County line at Readyville; let contract to J. B. Ramsey, Fayetteville, at \$73,743.72, for several bridges with 20-ft. spans.

Tex., Abilene—City, Dallas Scarborough, Mayor plans street improvements, including paving Hickory and Grape Sts., with permanent type construction; \$90,000 bonds available; W. A. Rainey, City Engr.

Tex., Austin—Travis County plans improving State Highway No. 20-A, Austin-Fredericksburg road, from Oak Hill to Hays County line; \$36,685; Geo. S. Matthews, County Judge; O. Leonard, County Engr.

Tex., Brenham—Ch. Engr., Bureau Public Roads, Washington, D. C., approved plans for concrete pavement on 32 mi. State Highway in Washington County; Federal Aid Project No. 236; additional \$100,000 granted by Federal Aid; J. H. Chappell, County Judge; G. A. Brocker, County Engr.

Tex., Bryan—City will pave streets; vote July 11 on \$30,000 bonds. Address The Mayor.

Tex., Brownsville—Cameron County plans completing concrete highway from Brownsville to Hidalgo County line, near La Feria; Oscar C. Dancy, County Judge; W. O. Washington, County Engr.

Tex., Clarksville—For full detail see Water Works.

Tex., Dallas—Dallas County Commsr. Court plans grading and graveling 5600 ft. road from intersection Fort Worth pike and Davis St., to West Dallas pike.

Tex., Fort Worth—Tarrant County plans constructing 7.5 mi. 18-ft. gravel road on State Highway No. 10, from Benbrook to Parker County line; Federal Aid Project No. 300; \$120,527; Hugh L. Small, County Judge; R. U. Glenn, County Engr.

Tex., Fort Worth—Tarrant County Commsr., let contract to General Construction Co., at \$11,800, to pave 1½ mi. Riverside-Albright Bridge road; 1-in. rock asphalt on rock base.

Tex., Georgetown—City. For full detail see Mch. Wanted—Paving.

Tex., Gonzales—Gonzales County Commsr. Court, J. C. Romberg, County Judge, plan constructing 9.27 mi. 15-ft. gravel road on State Highway No. 29; \$60,000; bids in about 30 days; Chas. F. Tom, County Engr.

Tex., Houston—City. For full detail see Mch. Wanted—Paving.

Tex., Joaquin—City construct road; voted \$75,000 bonds. Address The Mayor.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Junction—U. S. Bureau of Public Roads, Washington, D. C., approved plans to construct 9.9 mi. 12-ft. gravel road on State Highway No. 27, Sonora-Rock Springs road; Kimble County, Federal Aid Project No. 237; \$48,060; W. H. Baker, County Judge, Junction; W. E. Simpson Co., County Engr., 414 National Bank of Commerce Bldg., San Antonio, Tex.

Tex., Lubbock—Lubbock County plans constructing 8 mi. State Highway No. 7, between Slaton and Lubbock, Tex.; \$33,000; B. P. Brown, County Judge.

Tex., McKinney—Collin County let contracts to Tibbets Construction Co., 209½ W. 8th St., Fort Worth, Tex., for following: 4.84 mi. State Highway No. 5-A, through Lavon Road Dist., limestone base; gravel top; \$64,756.90.

12.4 mi. State Highway No. 1, Blue Ridge Dist.; gravel and stone surface; \$117,820.96. 3.72 mi. State Highway No. 5-A, through Copeville Road Dist.; rock base; gravel top; \$38,708.32.

10.19 mi. State Highway No. 5-A, through Farmersville Road Dist.; rock base; gravel top; \$103,886.91; surface for all to be furnished by county.

contract let to L. B. South, at \$11,599.67, to grade and construct drainage structures on 2.17 mi. State Highway No. 1; Federal Aid Project No. 234; O. T. Murray, County Judge; F. W. Cawthon, County Engr.

Tex., McLean—For full details see Water Works.

Tex., Orange—Orange County plans constructing 5.87 mi. State Highway No. 3, between Vidor and Jefferson County line; one course reinforced concrete; \$320,950; Ed. S. McCarver, County Judge; J. E. Johnson, County Engr.

Tex., Rockwall—Ch. Engr., U. S. Bureau Public Roads, Washington, D. C., approved plans to construct 13.36 mi. 18-ft. concrete road on State Highway No. 1; Rockwall County, Federal Aid Project No. 100; \$47,800 additional Federal Aid has been granted; J. K. Wells, County Judge; John A. Focht, County Engr.

Tex., San Angelo—Tom Green County Commsr. Court. For full detail see Mch. Wanted—Road Construction.

Tex., San Angelo—Tom Green County grade and construct concrete drainage structures on 16 mi. State Highway No. 9, between Wall and Carlbad; bids in about 30 days; J. T. Mathison, County Judge; Gibb Gilchrist, Engr. in charge.

Tex., Waco—Texas Highway Assn., ineqd., by J. A. Block, J. W. Reed, R. V. Glenn; all Fort Worth, Tex.

Va., Portsmouth—City, J. P. Harvey, Mgr., plans constructing 53,000 sq. yds. pavement; sheet asphalt, penetration macadam, concrete and graphite blocks; 5000 ft. concrete and graphite curbing; invites bids.

Va., Portsmouth—City, J. P. Jersey, Mgr., plans expending \$75,000 for street paving and \$125,000 for road construction; Jos. Weaver, Engr.

West Virginia — State Roads Commsr. Charleston, W. Va., construct 14 roads. For full detail see Mch. Wanted—Road Construction.

W. Va., Bluefield — City, Clarence E. Riddle, Mgr., let contract to Federal Asphalt Paving Co. to pave Bluefield Ave., from Popular St. to State line; asphalt macadam surface.

W. Va., Buckhannon—City let contract to E. J. Kneipfe's Sons, Newport, Ky., to complete Island Ave., and Beverly pike to Dist. line. Address The Mayor.

W. Va., Clarksburg—Northwestern Turn-

pike Assn., organized with A. A. Pickering, Prest., Rowlesburg; John J. Cornwell, V.P., Romney; F. W. Stemple, Secy., Aurora; Oscar C. Wilt, Treas., Clarksburg; co-operate with State Comsn.

W. Va., Huntington—City, Mat Miser, Commr. Streets and Sewers, plans paving LaTulle Ave. from Division St. to Stanley property; 1340 sq. yds. paving; 1000 ft. curb and gutter; 2½ St. to Jarrett St., from 9th St.; 3267 sq. yds. paving; 3400 ft. curb and gutter; 2nd St. west from 9th to 10th Aves.; 1325 sq. yds. paving; 870 ft. curb and gutter.

W. Va., Fairmont—City, Luke C. Arnett, Clk., pave 350 lin. ft. 4th St. west of Locust Ave., with brick on 4-in. concrete; also construct curb and concrete sidewalk along top; bids opened.

W. Va., Huntington—Cabell County Court, construct 3 roads. For full detail see Mch. Wanted—Road Construction.

Va., Richmond—State Highway Dept., plans constructing 42 mi. on State Highway No. 13, Richmond-Rappahannock route, via Mechanicsville Turnpike; Geo. P. Coleman, State Highway Commr.

W. Va., Ronceverte—City Commsr., A. S. Woodhouse, City Clk., plans paving Pocahontas Ave. between Walnut and Elm Sts.; bids opened.

W. Va., Wheeling—City will repay 1000 ft. on Warwood Ave., from 8th to 16th Sts. Address The Mayor.

Sewer Construction.

Ga., Atlanta—Sewer Committee let the following contract for sewer work: at \$124,650 to McDougald Construction Co., for extension of Lloyd st. sewer; at \$11,907 to J. B. McCrary Co. for extension to Stewart Ave. trunk sewer; at \$27,182, to Dysard Construction Co. for construction of small lateral sewers.

Ga., La Grange—For full details see Mch. Wanted—Sewer Construction.

Ky., Paducah—City, Henry A. Pulliam, Commr. of Public Works, opened bids for construction of sewer system; Moreno-Burkham Construction Co., St. Louis, and E. R. Harding & Co., Racine, Wis., lowest bidders. (Latest noted.)

La., Shreveport—For full detail see Mch. Wanted—Sewer Construction.

Md., Baltimore—For full detail see Mch. Wanted—Sanitary and Storm Water System.

Md., Catonsville—Baltimore county probably will install sewerage system. Address Commsr. at Towson.

Md., Prince George County — Washington Suburban Sanitary Commsn., Evans Bldg., Washington, D. C., let contract for sewer and water construction in Maryland as follows: For sewerage in Brentwood, Cottage City and nearby territory in Prince George County at \$54,573.75 and in Riverdale at \$41,834.75 to E. C. Baker of Uniontown, Pa.; for water mains for section three and Martin's addition to Chevy Chase and Woodmont at \$73,765.89 to Phillip A. Grieves, New York; also let contract at \$9128.75 for water mains from Takoma Park filter plant to connect with the main being laid from Silver Spring toward Chevy Chase and new branch and Slio branch connecting main.

Mo., Harrisonville—City contemplates constructing sewer system: may vote on \$50,000 to \$60,000 bonds in November; Wm. S. Byram, Mayor.

N. C., Chadbourn—For full details see Water Works.

N. C., Gibsonville—City will install sewer and water system. Address The Mayor.

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N. C., Mt. Airy—City, A. V. West, Mayor, will construct sewer system; construction in July. (See Mchy. Wanted—Sewer System Material.)

N. C., Spindale—For full details see Textile Plants.

Tex., Fort Worth—City, J. C. Lord, Water Commsn., rejected bids on construction of 2 siphons on intercepting and collecting mains of sewerage disposal plant; receives new bids July 8.

Tex., Plano—City will extend sewer system; \$40,000 available. Address The Mayor.

Tex., Port Arthur—City let contract at \$24,842 to Kroeger & Hayner, San Antonio, to construct sanitary sewer extension.

W. Va., Fairmont—Peacock Development Co., 205 Professional Bldg., will extend sewer and water system; 2000 ft. 6-in.. 2000 ft. 4-in., cast iron water pipe No. 1 grade; 3000 ft. 4-in. galvanized screw in water pipe No. 1 grade; 2000 ft. 12-in., 1500 ft. 10-in., 3000 ft. 8-in. sanitary sewer; Hugh J. Hood, Fairmont, Engr. in charge. (Lately noted.)

W. Va., Mannington—City, A. B. Baum, Commr., will complete sewer system in Homewood and Jericho.

Telephone Systems.

Ga., Milltown—J. W. Southall and R. E. Wilcox, Cairo, Ga., contemplate installing telephone system.

La., New Orleans—Cumberland Telephone Co., reported to expend big sum on plant, convert into automatic system.

Tex., Alvord—Alvord Telephone Co., A. C. Hughes, Prest.-Mgr., 209 Main St., Ft. Worth, Tex., plant installed. (Lately noted inptd., capital \$25,000.)

Tex., San Marcos—Southwest Texas State Normal College, Dept. of Physics, install radio telephone set, radius of 3000 mi.

Va., Evergreen—Hub Creek Telephone Co., inptd. with J. Mot Harvey, Prest.; S. H. Dickerson, Secy.

Textile Mills.

Ala., Montgomery—Cotton—State Board of Control & Economy, will probably let contract for machinery for cotton mill and shirt factory at Kilby State Prison to Sarco-Lowell Shops, Lowell, Mass., The Draper Corp., Hopedale, Mass., and H. and B. American Machinery Co., Pawtucket, R. I.; cost about \$200,000. (Contract for construction of building previously noted let to Hugger Bros., Montgomery.)

Ala., Oxford—Southern Mills Corp., is receiving bids for construction of extension to plant, building 72x72 ft. warehouse and erecting 5 cottages; cost about \$30,000.

N. C., Gastonia—Loray plant of Jenckes Spinning Co., of Pawtucket, R. I., let contract to Aberthaw Construction Co., 27 School St., Boston, for 5-story addition to plant; install about 40,000 spindles, to be transferred from Pawtucket plant; cost about \$200,000.

N. C., Spindale—Spinners Processing Co., Inc., S. E. Elmore, Treas., capital \$300,000, will construct plant to mfr. yarn by warp mercerizing process; 240x135 ft.; 2 story; mill construction; contract for building let to Potter & Shackelford, Greenville, S. C.; contract let to Textile Finishing Mchy. Co., Providence, R. I., for warp mercerizing machine with weekly capacity of 100,000 lbs. of yarn; contract for Foster winders, let to Whith Machine Works; erect 25 dwellings as first unit of mill village, also warehouse; will install electric lights, water and sewerage system; boiler house with 300 H. P. boilers; caustic recovery plant, etc.

S. C., Autun—Cotton—Pendleton Mfg. Co., capital \$100,000, organized with E. N. Sitton, Prest.; Cema Chreitzberg, V.-P.; B. M. Aull, Secy.

S. C., Clover—Hampshire Spinning Co., capital \$1,000,000, organized with Thomas McConnell, Prest.; F. Coit Johnson, V.-P.; Hugh McConnell, Secy.

S. C., Greenwood—Panola Cotton Mills, B. B. Gossett, Prest., contemplating increase of capital to \$1,000,000.

S. C., Ware Shoals—Cotton and Cloth—Ware Shoals Mfg. Co., let contract to Fiske-Carter Construction Co., Greenville, S. C., for auxiliary power plant; and for addition to warehouse.

Tenn., Knoxville—Appalachian Mills Co., capital \$1,200,000 inptd. by Selby C. Parker, Harry E. Pape, John W. Green.

Va., Schoolfield—Branch of Danville Bleachery—Riverside and Dan River Cotton Mills, Inc., Danville, will erect bleachery; 300x148 ft.; 4 story; concrete; cost \$450,000; install approximately 40,000 spindles and 126 cards; John Peckyjohn, Lynchburg, Contr.; Lockwood, Greene & Co., Boston, Engrs.; contract for wiring let to Walker Electric & Plumbing Co., Atlanta, Ga.

Water Works.

Ark., Camden—H. S. Lazarus has contract for water connections in Paving District No. 1.

Fla., Quincy—For full detail see Electric Light Plants.

Md., Baltimore—For full detail see Sewer Construction.

N. C., Chadbourn—Board of Commr. will expend \$50,000 in installing water and sewer system and improving streets; G. H. Bishop of Carolina Engineering Co., prepared plant; contract let about June 26.

N. C.—Gibsonville—For full detail see Sewer Construction.

N. C., Morganton—Town, O. B. Lackey, Mgr., will open bids June 30 for construction of gravity water system and extension to distribution system.

N. C., Spindale—For full details see Textile Plants.

N. C., Winston-Salem—Engineering Division of Department of Public Works will ask for bids within next thirty days for extensive improvements to water plant; install 6 filters; construct coagulating basin, wash tower, etc.; install ariator, etc.

Okl., McAlester—Board of Commr., appointed Benham Engineering Co., Kansas City, Mo., Consnl. Engrs., on Bull Creek water project.

Okl., Wewoka—Board of Trustees rejected bids for water works improvements, lately noted, opens new bids June 26; work consists of two 250,000 G. P. M. rapid sand mechanical filters, high and low duty pump station, repairing and raising present dam, intake, etc.; plans and specifications on file at office Benham Engineering Co., 512 Gumbeil Bldg.

S. C., Ware Shoals—For full details see Textile Plants.

Tenn., Nashville—State Board of Administration, Home for Feeble Minded let contract at \$26,000 to John Bouchard & Sons, to erect water works plant.

Tex., Clarksville—City, John M. Butcher, Mayor, will improve water works, voted \$22,000 bonds; install incinerator plant, voted \$3000 bonds; construct additional street paving, voted \$20,000 bonds.

Tex., Dublin—City will improve water works; voted \$25,000 bonds. Address The Mayor.

Tex., McLean—City will construct water-works, light and power plant and street improvements; votes July 18 on \$74,000 bonds. Address The Mayor.

Tex., Moran—City will expend \$35,000 for water works improvements. Address The Mayor.

Tex., Robstown—Nueces County Water Improvement District Commr. No. 3, let contract to Smith Bros., Crockett, Tex., to construct irrigation and water works plant; capacity of pumping plant from 18,000 to 20,000 gals. per minute; water supply and purification plant, etc.; 23 mi. irrigation canals to irrigate 4952 acres in north central part of county.

Tex., Winters—City will improve water works; voted \$30,000 bonds. Address The Mayor.

Va., Farmville—For full details see Mchy. Wanted—Coagulating Basin.

W. Va., Fairmont—For full details see Sewers.

Woodworking Plant.

Ala., Ensley—Toys—Storey-Matthews Mfg. Co., capital \$60,000; inptd. with S. C. Matthews, Prest.; E. G. Sheurman, Secy-Treas.

Fla., Brooksville—Veneer—Florida Veneer & Crate Co., capital \$25,000, inptd. with H. S. Zoller, Prest.; J. K. Coogler, Secy-Treas.

Ky., Louisville—Flooring—Louisville Parquet Flooring Co., capital \$50,000, inptd. by Geo. B. Lapping, Guy W. Thels and William Furlong.

Ky., Newport—Furniture—Dine-Schabell Co., increased capital to \$100,000.

N. C., Mebane—Furniture—White Co., W. E. White, Prest., contemplates installing motors and generators to operate plant to take place of steam power.

Okl., Hugo—Furniture—Home Furniture Co., inptd. by C. C. Shull and E. E. Verner both Hugo; E. R. Hunter, Paris, Tex.

Tenn., Bells—Woodworking—Success Specialty Co., Box 102, has under construction \$20,000 plant; install woodworking mchy. (See Mchy. Wanted—Woodworking Mchy.)

Tex., Tyler—Furniture—Axford Hicks, Jr. contemplates establishing plant for mfrs. of furniture. (See Mchy. Wanted—Woodworking Mchy.)

W. Va., Bluefield—Furniture—Phelps Furniture Co., erect 40x50-ft. addition on McCulloch Ave. and two additional stories, 50x140-ft. brick walls, concrete foundation, metal ceilings; M. H. Pedigo, Archt.

FIRE DAMAGE

Ark., El Dorado—Masonic Temple; loss \$40,000.

Fla., Branford—Owen & Dorsett, N. H. Green and S. C. Kelly's stores.

Fla., Tampa—Corporation Ice Plant, loss \$100,000.

Ga., Fitzgerald—Georgia Shoe Co.'s warehouse occupied by Saper Skin & Hide Co.

Ga., Social Circle—Edw. L. Sheppard's storage building; W. L. Huff's residence.

Ga., Swainboro—J. R. Coleman's saw mill and dry kiln.

Ky., Louisville—J. E. Slaughter's buildings, 418-20 W. Liberty St.; loss \$10,000; Carroll Film Co.; \$28,000; W. J. Rueff Sign Co.; \$9000.

Ky., Pikeville—Big Sandy Hotel; Sam

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Saad's store; Thornbury's Grocery Store; Rutroff's Jewelry Store; Coy Collin's building.

La., Madisonville—Dendiger Mercantile Co.'s store and bakery.

Md., Baltimore—Acme Box Co.'s plant, loss about \$35,000; James J. Lamon's lumber office and yard, Eden and Alleanna Sts., loss \$50,000; Shinnick Lumber Co.'s office and lumber yard, loss \$20,000; American Express Co.'s shipping shed, loss \$10,000; H. D. Dreyer & Co.'s machine plant at Alleanna and Fleet Sts., loss \$5000; Loose-Wiles Biscuit Co.'s warehouse at 1407-09 Fleet St., loss \$5000.

Miss., Kosciusko—Municipal Light & Water Plant; loss \$20,000. Address The Mayor.

Mo., St. Joseph—Grain Belt Mills' plant.

N. C., Lincolnton—Lincolnton Creamery & Ice Cream Co.'s plant; loss \$60,000.

Okl., Ponca City—Miller Bros.'s slaughter house; loss \$10,000.

S. C., Eastover—J. A. Byrd's residence.

S. C., Hodges—E. B. Mabry's store.

Tenn., Nashville—Farris Hardwood Lumber Co.'s saw mill; loss \$40,000.

Tenn., Nashville—Mrs. L. Greenspan's residence, 114 20th Ave., South.

Tex., Albany—Shackelford County courthouse; damage \$15,000.

Tex., Dallas—Cohen Millinery & Clothing Co.'s store on Elm St.

Tex., Graham—Crossland Hotel, Owl Drug Store and Moody Garage at Oil City.

Tex., Greenville—W. B. Wards residence.

Tex., Orange—Yellow Pine Paper Mill Co.'s plant.

Va., Highland Springs—Robt. Swann's residence and garage; Chas. G. Givens' residence and garage.

Va., Richmond—Dixie Bag Co.'s building.

Va., Saluda—J. H. Pitt's residence and outbuildings; loss \$12,000.

W. Va., Morgantown—A. L. Black Coal Co.'s coal tipple; loss \$15,000.

W. Va., Nitro—American Mfg. Co.'s plant, M. Lintzmeyer, Mgr.; loss \$10,000.

bids opened.

Va., Orange—Ancient Free and Accepted Masons plan \$25,000 building.

Bank and Office.

Ala., Tuscaloosa—Merchants Bank & Trust Co., Chas. B. Verner, Prest., will erect building, Broad St. and Greensboro Ave.; 8 to 10 stories and basement; cost, including site, \$350,000 to \$400,000; banking room, 40x120 ft.; D. O. Whildin, Archt., Birmingham. (Previously noted.)

Fla., Jacksonville—Federal Reserve Bank of Atlanta will erect Jacksonville Branch, Hogan and Church Sts.; about \$200,000; 53x90 ft.; 3 stories and basement; reinforced concrete; fireproof; tile roof; tile, marble, hardwood and cork floors; low pressure steam heat; electric elevators; A. Ten Eyck Brown, Archt., Forsyth Bldg., Atlanta; bids about August 15. Address Chairman of Board, Jacksonville.

Ga., Atlanta—Massell Construction Co. will erect \$100,000 building, Spring and Cain Sts.; 6 stories.

La., New Iberia—Iberia Bldg. Assn. will erect 2-story brick building; F. G. Churchill, Archt., New Orleans.

Md., Baltimore—National Bank of Baltimore, T. Rowland Thomas, Prest., will raze 2 buildings at St. Paul and Baltimore Sts.; erect \$450,000 structure; 80x102 ft.; 4 stories; granite; slate and asbestos roof; elevators; vaults, etc.; steam heat; bids until July 10; Theo. Wells Pietsch, Architect, American Bldg.; following contractors estimating: Fisher & Carozza Bros. Co., Continental Bldg.; Consolidated Engineering Co., Calvert Bldg.; Geo. A. Fuller Co., American Bldg.; Piel Construction Co., Edmondson and Whitmore Aves.; J. L. Robinson Construction Co., Carrollton & Lafayette Aves.; Cogswell-Koether Co., 406 Park Ave.; H. D. Watts Co., Garrett Bldg.; Price Construction Co., Maryland Trust Bldg.; J. Henry Miller, Inc., Miller Bldg., Eutaw and Franklin Sts.; Fraim Bros. & Halley, 18 Clay St.; M. A. Long Co., Munsey Bldg.; Morrow Bros., Fidelity Bldg.; West Construction Co., American Bldg.; Chas. L. Stockhausen Co., Marine Bank Bldg.; Jno. Hiltz & Sons Co., 2 E. Redwood St.; P. C. Street, 3408 Norwood Ave.; B. F. Bennett Bldg., Co., 123 S. Howard St.; all Baltimore; Fred T. Ley & Co., 19 W. 44th St., New York.

Mo., Cameron—Cameron Trust Co. will erect building. (Previously noted at Mo., Columbia.)

N. C., Bryson City—Citizens Bank will erect 2-story brick building.

N. C., Gastonia—Armstrong Land & Investment Co., will erect building for Armstrong chain mills; 30x100 ft.; 2 stories, second to be occupied by Gastonia Cotton Co.

N. C., Gastonia—Third Trust Co., J. White Ware and others, will erect building for Third National Bank; Milburn, Heister & Co., Archts., Washington, D. C. and Durham, N. C.; J. A. Jones Construction Co., Charlotte, low bidder at \$278,466. (Previously noted.)

S. C., Columbia—Federal Land Bank, D. A. Houston, Prest., plans building; \$100,000; 3 or 4 stories; desires architects in different parts of country to submit plans.

Tex., Houston—S. F. Carter will erect 5-story addition to Carter Bldg.; 2 additional high speed elevators; Sanguinet, Staats & Gottlieb, Archts.

Va., Hopewell—Elder Bros. will erect \$30,000 office building next to present store.

W. Va., Wheeling—Finance Co., Thos. O. Swartz, Prest., New York, will erect \$200,000 office building at 14th and Market Sts.; steel and brick; Edward Franzheim, Archt.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

Fla., Tampa—R. W. Hudson will erect \$10,000 building on S. Dakota Ave.

Ga., Atlanta—H. Cohen will erect two 2-story frame buildings, Summit and Highland Aves.; \$14,000.

Ga., Atlanta—J. S. Snow will erect \$40,000 building, 681 W. Peachtree St.; 2 stories; brick veneer.

La., New Orleans—M. A. Bacchini will erect 2 duplex apartment buildings, 1800 Valence St. and 4809 Baronne St.; frame and cement stucco; Morgan D. E. Hite, Archt., 1416 Hibernia Bldg.; owner builds.

La., New Orleans—H. G. Markel is preparing plans for \$25,000 building; 3 stories; brick and frame.

La., Lake Charles—Gayle Apartments, Inc., Edwin F. Gayle, Prest., will erect \$60,000 to \$70,000 building; 2 stories; 18 apartments; brick.

La., New Orleans—M. Fertel will alter store and apartment building, Rampart and Julia Sts.; \$12,000; Weiss & Dreyfous, Archts.; bids opened.

Mo., Clayton—H. A. Barnett, Sawyer Bldg., St. Louis, will erect flat buildings of 3 and 4 families each; \$50,000; 2 stories; 34x61 ft.; brick; stone trim; Oliver J. Popp, Archt., Odd Fellows Bldg., St. Louis; taking bids.

Mo., Kansas City—McCanless-Miller Realty Co., Bonfils Bldg., will erect building, 3239 Harrison St.; \$50,000; 3 stories and basement; 36x118 ft.; brick; stone trim; private plans; day labor; sub-contracts let.

Mo., St. Louis—Arata, 14 N. 8th St., will erect building on Pershing Ave.; \$80,000; 3 stories and basement; apartments of 6 rooms each; fireproof; brick; stone trim; ready for bids.

Mo., St. Louis—F. W. & E. A. Klusmeyer, 3936 McPherson Ave., will erect \$100,000 building, 5616 Pershing St.; 55x85 ft.; 6 stories; brick and concrete; owner builds and sublets.

Mo., University City—Hoener, Baum & Froese, 1519 Federal Reserve Bank Bldg., St. Louis, has completed plans for \$40,000

building; 67x56.3 ft.; brick and frame; metal stairs; tile floors; incinerator; steam heat; composition and tile roof; 6 apartments.

Okla., Okahoma City—E. C. Ross will erect \$11,000 building, 119 W. 17th St.; brick veneer.

Tenn., Memphis—Abraham Lewis and J. J. Ginsburg, 96 N. Main St., will erect \$60,000 building, Madison Ave. and Idlewild St.; 3 stories; brick; 18 apartments; Charles Deas, Archt.

Tenn., Memphis—Blair Construction Co. will erect \$16,000 building, 1822 N. Parkway; brick veneer.

Tex., El Paso—Ellion Bros. will erect \$10,500 building, block 16, Sunset Heights addition; 1 story; brick.

Tex., Houston—Joe Levinson will erect \$14,000 building, Polk Ave. and St. Emanuel St.; 2 stories; brick; 4 apartments.

Tex., San Antonio—H. R. Hohenberger will erect store and apartment building, 100 block Roosevelt Ave.; brick and concrete; R. L. Pierce, Archt.; Jay DePuy, low bidder at \$15,915, not including plumbing and wiring.

Tex., San Antonio—Mrs. A. Levyson & Son will erect building on Tobin Hill; frame; 4 apartments; David A. Lown, Archt.

Association and Fraternal.

La., Monroe—Ouachita Valley Camp No. 10, W. O. W., J. S. Blackmon, Chrmn., Bldg. Comm., Box 58, will erect \$25,000 building, Jackson St.; 43x120 ft.; 2 stories; brick; terra cotta front; 20-year roof; pine and concrete floors; gas heat; city lights; Seymour Van Os, Archt., Shreveport; bids opened about July 1. Address Mr. Blackmon. (Previously noted.)

La., New Orleans—Weiss & Dreyfous are preparing preliminary plans for \$50,000 fraternal building, Broadway and Freret Sq.; 2 stories.

Mo., Columbia—Salvation Army plans \$50,000 home.

Tex., Nacogdoches—Woodmen of the World, Arthur A. Seal, Consul Commdr., Camp 210 will erect building; 3 stories; 60x100 ft.; steel and brick; Edward Franzheim, Archt.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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Churches.

Ala., Andalusia—Methodist Church, Dr. H. C. Threadgill, Pastor, plans church.

Ala., Enterprise—Methodist Church, Dr. D. H. McNeal, Pastor, will erect \$20,000 Sunday school building; install \$10,000 pipe organ.

Fla., Lake Worth—Sherman Childs prepared plans for \$10,000 Baptist Church at 10th and L Sts.; tile or stucco.

La., Bogalusa—Methodist Episcopal Church, South, will erect \$40,000 building; brick; Rathbone DeBuys, Archt., New Orleans; bids opened.

La., New Orleans—Metairie Ridge Presbyterian Church, Rev. J. Walter Haggard, Pastor, will erect church in Bonnibel Place; 50x80 ft.; hollow tile; auditorium to seat 333; Morgan D. E. Hite, Archt., 1416 Hibernia Bldg.; ready for sub-bids.

Miss., Natchez—First Baptist Church, Dr. W. A. Borum, Pastor, will erect \$50,000 to \$60,000 building on Main St.

Mo., Columbia—Second Christian Church, colored, will erect \$35,000 building; capacity 500; basement completed. Address The Pastor.

Mo., Grandview—Baptist Church plans building. Address The Pastor.

Mo., Kansas City—Immanuel Presbyterian Church, Dr. Samuel D. Harkness, Pastor, will erect addition at 41st and Harrison Sts.; \$75,000; native stone; English type; capacity 700; Thos. D. Broad, Archt.

Mo., Lebanon—Baptist Church will erect building; 46x80 ft.; brick; prepared shingle roof; rolling partitions; steam heat; electric lights; Hoener, Baum & Froese, Archts., 1519 Federal Reserve Bank Bldg., St. Louis; contract about July 1.

Mo., Springfield—Christ Episcopal Church will erect \$50,000 church and parish house; 44x105 ft. and 28.6x49.6 ft.; stone; slate roof; concrete, hardwood and the floors; interior tile; steam heat; electric lights; Hoener, Baum & Froese, Archts., 1519 Federal Reserve Bank Bldg., St. Louis; bids opened about July 15. (Lately noted.)

Mo., Wellsville—Baptist Church will erect building; James Douglas, Archt.

N. C., Charlotte—Dilworth Methodist Church will erect \$125,000 church on E. Boulevard near Springdale Ave.; 130x98 ft.; limestone; slate roof; auditorium, including balcony, to seat 1200; C. C. Hook and Marvin W. Helms, Archts.; ultimate plans call for \$75,000 Sunday school building and parsonage.

N. C., East Spencer—Methodist Church, Rev. R. C. Kirk, Pastor, will erect \$25,000 building; concrete and brick; stone trim; auditorium; 20 classrooms; C. C. Hook, Archt., Charlotte.

N. C., Raleigh—Edenton St. Methodist Church will enlarge building to seat 400 more; \$10,000.

N. C., Raleigh—Catholic Church of Sacred Heart will erect \$60,000 building, Hillsboro and McDowell Sts.; Gothic design; cross-shape, 100x45x60 ft.; Wake county granite; Charles Irwin, Archt.

N. C., Salisbury—St. John's Lutheran Church plans building on Inniss St.

Okl., Ada—Presbyterian Church will erect \$50,000 building. Address The Pastor.

Tex., Cisco—First Presbyterian Church, Rev. Gaines B. Hall, Pastor, will erect \$25,000 building; stone or brick; desires architects to submit plans.

Tex., Electra—Baptist Church, Rev. E. M. Francis, Pastor, will erect \$50,000 building.

Tex., Stamford—Central Christian Church plans building. Address The Pastor.

Tex., Waco—Austin Ave. Methodist Church, Dr. R. E. Goodrich, Pastor, will erect \$100,000 addition; Milton W. Scott & Co., Archts. (Previously noted.)

Va., Roanoke—Melrose Methodist Church plans \$40,000 building. Address The Pastor.

City and County.

D. C., Washington—Library—Carnegie Corp. appropriated \$100,000 for library in Mt. Pleasant. Address Theo. W. Noyes, Prest., Public Library Board of Trustees.

Fla., Clearwater—City Hall—City will receive bids until July 5 to erect city hall; \$50,000; 45x85 ft.; 2 stories and basement; brick; stone and terra cotta trim; composition roof; steam heat; plans and specifications from M. Leo Elliott, Citizens Bank Bldg., Tampa, or from Lester Avery, Peoples Bank Bldg., Clearwater, Asso. Archts. (Lately noted.)

La., Savannah—Kitchen, etc.—Cly. J. W. Motte, Purchasing Officer, will erect kitchen, dining room and laundry in police barracks yards; also repair storage sheds; bids opened.

Ky., Beattyville—Jail—Lee County Fiscal Court will receive bids until July 10 to erect jail building at courthouse; plans and specifications from C. C. & E. A. Weber, Archts., Miller Bldg., Cincinnati, O., or from office Judge Arnold, Beattyville.

Ky., Louisville—Auditorium, Hospital—City Council plans \$750,000 memorial auditorium, bond election in November; Judge Robt. W. Blingham, Chrmn. Memorial Comns.; also \$75,000 bonds for tuberculosis hospital.

La., New Orleans—Auditorium—City plans \$1,000,000 auditorium at St. Charles and Lafayette Aves. Address The Mayor.

Mo., Richmond—City Hall—City will vote on \$75,000 bonds issue for city hall; H. D. Pampal, Archt., Kansas City. (Lately noted.)

Tex., San Antonio—Market House, etc.—City, O. B. Block, Mayor, plans to cover plaza; wooden frame and sheet iron; also to remodel present market house; glazed brick interior walls; tile floor.

Tex., San Antonio—Storehouse—City, A. L. Dunnica, City Pur. Agt., will erect municipal storehouse at City Materials Yards.

Courthouses.

Okla., Newkirk—Kay County will vote August 1 on \$175,000 bonds to erect courthouse. Address County Comrns.

Tex., Dalhart—County, A. M. Reese, County Judge, voted \$150,000 bonds for courthouse and jail.

Dwellings.

Ala., Birmingham—Mrs. Catherine Erswell will erect \$10,000 dwelling, 2701 Argyle Rd.; hollow tile.

Ark., Hot Springs—Dave Burgauer, Vice-Prest., Arkansas Trust Co., will erect dwelling; 1½ stories and basement; 40x66 ft.; brick veneer, face brick or stucco; tile, metal or clay roof; hardwood and pine floors; interior tile; hot water heat; French doors; Joe Horn, Archt. Address Mr. Burgauer.

Ark., Pine Bluff—Charles Duff will erect \$15,000 Colonial dwelling in Rutherford Park.

Fla., Jacksonville—George O. Holmes will

erect 2-story hollow tile dwelling, Montague Terrace; about \$14,000.

Ga., Atlanta—L. A. Trowbridge will erect 4 one-story brick veneer dwellings, Cascade Ave.; \$6000 each.

Ga., Atlanta—C. E. Freeman will erect \$20,000 dwelling, 19 Springdale Rd.; 2 stories; brick veneer.

Ky., Louisville—Albert Townsley will erect 4 dwellings, 831-47 Sutcliffe Ave.; \$3250 each.

Ky., Louisville—Mammoth Realty Co., will erect 6 dwellings at Burton and 8th Sts.; \$2000 each.

Ky., Paducah—Gus Legay will erect Colonial dwelling on Cairo Rd.; 2 stories; 9 rooms; D. Harry Jamieson, Archt. (Previously noted.)

La., Monroe—Wm. Drago, 7831 Jeanerette St., New Orleans, and L. Milton King, Monroe, Asso. Archts., completed plans for \$18,000 dwelling; 2 stories; hollow tile and stucco; tile roof.

La., Monroe—M. H. Marks will erect \$14,000 dwelling; 1½ stories; frame stucco; L. Milton King, Monroe and Wm. Drago, 7831 Jennerette St., New Orleans, Asso. Archts.

La., New Orleans—Frank Pugh will erect \$20,000 dwelling at Country Club; 2 stories; tile.

La., New Orleans—Mrs. Wm. M. Garie will erect dwelling, St. Charles and Dufossat Sts.; \$20,500; owner builds.

La., New Orleans—Roy and Louis P. Bryant will erect Spanish bungalow, 1215 Exposition Blvd.; Morgan D. E. Hite, Archt., 1416 Hibernia Bldg.; ready for sub-bids.

La., New Orleans—P. F. Donnes will erect 2-story duplex dwelling, Plum and Adams Sts.; \$12,000; bids opened June 26; also 1-story duplex, Gentilly Parish; \$10,000; bids opened June 28; plans by owner.

La., New Orleans—Morgan D. E. Hite, 1416 Hibernia Bldg., is receiving sub-bids on 2-story frame dwelling, Valence St. near Prytanis St.

La., New Orleans—R. Lockett will erect \$10,000 dwelling, Palmer & S. Robinson Sts.; 2 stories; F. G. Churchill, Archt.

La., New Orleans—Richard McCarthy will erect 1-story dwelling at 1222 Broadway; Morgan D. E. Hite, Archt., Hibernia Bldg.

La., New Orleans—H. G. Markel, Archt., is receiving bids for \$12,000 dwelling, Napoleon & Rocheblave Sts.; 2 stories; tile; 30x57 ft.

La., New Orleans—Ed. L. Richardson will erect \$60,000 residence, 4109 St. Charles Ave.; brick and tile.

La., New Orleans—R. Rougelout will erect \$23,000 dwelling, Napoleon and Liberty Sts.; 44x78 ft.; Burke & Dufrechou, Archts., completing plans.

La., New Orleans—F. B. Stern will erect 1-story bungalow, Broadway and Jeanerette St.; \$12,000; Jones & Roessle, Archts.; bids opened.

La., New Orleans—H. Vittur will erect \$10,000 dwelling, Jena and Howard Sts.; 2 stories; 25x65 ft.; Burke & Dufrechou, Archts.; ready for bids.

Md., Baltimore—F. J. Mackert, 305 S. Rochester St., will erect 2 duplex dwellings, 3104-3110 Walcott Ave.; about \$15,000; brick; 8 rooms and bath; Herbert C. Alkin, Archt., 4115 Ridgewood Ave.

Md., Baltimore—Owners' Realty Co., 2 E. Lexington St., will erect 30 two-story dwellings.

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ings and bungalows on 10½-acre tract, Reisterstown Rd. north of Woodland Ave.; total \$125,000; ultimate plans call for 120 dwellings; ½-acre playground.

Md., Baltimore—Louis Farber, 3543 Park Heights Ave., will erect 6 dwellings, Windsor Mill and Allendale Rds.; 2 stories; brick; slate roofs; steam heat; \$18,000; S. Russell, Archt., 11 E. Lexington St.; owner builds.

Md., Baltimore—Mary H. Gontrum, Franklin Ave. near Belair Rd., will erect 3 bungalows, Echodale Ave. near Belair Rd.; \$11,000; 1½ stories; frame.

Md., Baltimore—Frank Novak Realty Co., 33rd St. and Tiffany Ave., will erect 50 dwellings, 1601-47, 1600-12, 1614-50 Chilton Ave.; total \$150,000; 2 stories; brick; owner builds.

Md., Baltimore—Louis M. Silberstein, 344 Equitable Bldg., will erect 2½ story frame dwelling, 3506 Springdale Ave.; 28x54 ft.; slate roof; steam heat; \$10,000; N. S. Horn, Archt.; owner builds.

Md., Baltimore—Albert G. Towers, Title Guarantee & Trust Co., will erect dwelling, Wendover Rd., Guilford; Edward L. Palmer, Jr., Archt., 513 N. Charles St.

Md., Baltimore—City and Suburban Realty Co. will erect 2-story cottage, Fair Oaks and Beechland Aves., and 1½-story bungalow, Birchwood Ave. near Beechland Ave.; frame; total \$10,000.

Mo., Kansas City—Bigham Building Co. will erect 3 frame duplex dwellings, 301-305 311 W. 51st St.; \$24,000.

Mo., University City—J. A. Raible will erect dwelling; \$17,000; brick; stone trim; slate roof; hot water heat; 29x45 ft.; 2 stories; Hoener, Baum & Froese, Archts., 1519 Federal Reserve Bank Bldg., St. Louis.

S. C., Seneca—Chas. N. Gignilliat will erect \$20,000 dwelling; tile and brick veneer; oak and rift pine floors; tin roof; tile porch floors and baths; vacuum vapor heat; electric lights; Casey & Fant, Archts., Anderson.

Tex., Houston—D. P. Perkins will erect \$16,000 dwellings, Montrose and Colquitt Sta.; brick and tile; slate roof; 10 rooms.

Tex., San Antonio—Ed. H. Kifer will erect dwelling on Terrell Rd.; 2 stories; frame; Atlee B. and Robert M. Ayres, Archts.; ready for bids.

Tex., San Antonio—Frank M. Lewis will erect dwelling on Encino Ave., Alamo Hghts.; 2 stories; frame stucco or hollow tile; Adams & Adams, Archts.; Chas. M. Webb, low bidder at \$17,760.

Government and State.

D. C., Washington—Guard House—Constructing Quartermaster, Room 2306 Munitions Bldg., will erect guard house at Walter Reed General Hospital; bids opened June 28.

D. C., Washington—Treasury Bldg.—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., receives bids until July 13 to alter fourth floor of Treasury Bldg. for duplicating gallery; drawings and specification from office of Supervising Archt.

Ga., Columbus—Officers Quarters—Constructing Quartermaster will erect officers' quarters at Fort Benning; \$160,000.

Ga., Dawson—Post Office—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., rejected bids to erect post office. (Contract lately incorrectly reported let.)

Md., Aberdeen Proving Grounds—Kitchens, etc.—Office Constructing Quartermaster, W.

T. Howe, Capt., will receive bids until June 28 to remodel buildings No. 438-A, B, and C; alterations to buildings No. 147 and 437; erect kitchens at Edgewood Arsenal, Md.; plans and specifications from office Constr. Quartermaster, Aberdeen Proving Grounds or from office Quartermaster, Edgewood Arsenal.

Hospitals, Sanitariums, Etc.

La., New Orleans—Charity Hospital will erect \$90,000 building, Tulane and Villere Sts.; 3 stories; concrete. Address Supt.

La., New Orleans—Catholic Diocese plans \$500,000 hospital, Burdette and Fig St. Address Archbishop Shaw.

N. C., Durham—Milburn, Heister & Co., Washington, D. C. and Durham, are preparing plans and specifications for Lincoln Hospital; \$150,000; ready for bids about September 1.

N. C., Lexington—Drs. J. T. Burrus and H. W. McCain, both High Point, plan to erect hospital.

Tenn., Humboldt—City will erect hospital; cost about \$25,000. Address G. W. Bailey.

Hotels.

Fla., Tallahassee—Regar & O'Neal, Miami, will erect 100-room hotel.

Fla., Tampa—Haven Beach Hotel & Resort Co., Incptd. with \$150,000 capital; Geo. L. Dick, Prest.; L. W. Lee, V.P.; Douglass McMitchell, Secy.; C. D. Hull, Treas.; will erect hotel and cottages at Haven Beach resort.

Mo., Jefferson City—J. A. Huegel will erect \$500,000 hotel; 12 stories; 200 rooms, roof garden, auditorium and convention room to seat 1000, and 19 sample rooms; Hellmuth & Hellmuth, Architects, St. Louis. (Lately noted.)

Mo., Kirksville—Burr L. Eastin will erect \$160,000 hotel; 4 stories; fireproof; 96 rooms; R. J. Sanneman, Archt., Kansas City.

N. C., Charlotte—Citizens Hotel Co., J. H. Little, Prest., will erect hotel, W. Trade and Poplar Sts.; \$800,000; 14 stories; 250 rooms; fireproof; steel and hollow tile; interior tile; ornamental terra cotta; composition roof; marble or tile floors; metal doors; steel sash and trim; wire glass; mail chutes; Wm. L. Stoddart, Archt., 9 E. 40th St., New York; bids opened about July 20. (Previously noted.)

Okl., Bristow—J. J. Egbert does not contemplate erection of hotel as lately reported.

S. C., Aiken—Real Estate & Fidelity Co., C. J. Hill, Prest., receives bids until June 30 to erect additions to Highland Park Hotel; plans and specifications at office Willis Irvin, Archt., Lamar Bldg., Augusta, Ga. (Lately noted.)

Tex., Colorado—J. H. Greene will erect hotel.

Miscellaneous.

D. C., Washington—Market, etc.—National Public Markets Corp., will erect 4-story combination market and apartment building, Georgia and New Hampshire Aves. and Rock Creek Church Rd., to be known as Petworth-Parkview Market.

Fla., Fort Pierce—Clubhouse—Woman's Club plans clubhouse.

La., New Orleans—Market—New Prytanis Market Co., will erect 1-story market, Prytanis and Lion Sts.; Sam Stone, Jr., Archt., 714 Union St.; G. F. Favrot is lowest bidder at \$11,850. (Lately noted.)

Md., Baltimore—Home—Jewish Children's Society will erect buildings; Jos. Evans Sperry, Archt., Calvert Bldg.; bids opened

Mo., Carthage—Hall—Carthage Memorial Assn., Allen McReynolds, Prest., will erect

\$75,000 memorial hall; 2 stories; 147x100 ft.; brick, steel, reinforced concrete; limestone trim; Percy K. Simpson, Archt.; Chas. Kyte, contr. for foundation.

N. C., High Point—Clubhouse—Sunset Park, Incptd. with \$125,000 capital; Wescott Roberson, Prest.; Frank Wineske, V.P.; R. T. Amos, Secy.-Treas.; purchased 90 acre site and will erect clubhouse, construct golf course, etc.

N. C., Norwood—Resort—Jno. T. Ebd, Chas. Smith and others will remodel present hotel, erect hotel, construct 18-hole golf course, tennis courts, etc. in connection with Rocky River Springs.

Tenn., Chattanooga—Clubhouse—Mountain City Club, Morrow Chamberlain, Prest., will expend \$60,000 to remodel and erect 12 additional rooms to clubhouse; C. E. Bearden, Archt.

Tex., Clarendon—Clubhouse—Clarendon Country Club will erect 2-story building.

Railway Stations, Sheds, Etc.

Mo., Kirksville—Wabash Ry. Co., A. O. Cunningham, Ch. Engr., St. Louis, will erect \$35,000 freight station, McPherson and Jefferson Sts.

Tenn., Greeneville—Southern Ry. Co., J. S. Lemond, Ch. Engr., Lines East, Charlotte, N. C., will erect passenger station.

Tex., Waco—Missouri, Kansas & Texas R. R., Frank Ringer, Chief Engr., St. Louis, will erect freight depot; 50x400 ft., including freight wharves; 2 stories; reinforced concrete and brick.

Tex., Fort Worth—Missouri, Kansas & Texas R. R., Frank Ringer, Ch. Engr., St. Louis, will erect depot.

Schools.

Fla., Jacksonville—Duval County Board of Public Instruction, F. A. Hathaway, Supt., will erect 8-room addition to West Riverside School; \$50,000; brick and stone; asbestos shingle roof; wood floors; interior tile; boiler for heating plant; J. H. Klutho, Archt.; bids opened. (Lately noted.)

Fla., Petersburg—City Commissioners will call election on \$40,000 to erect kindergarten building.

Ga., Brunswick—Glynn County Board of Education, C. F. Dryden, Secy., will erect \$130,000 school; brick, hollow tile, frame and concrete; asphalt, built-up roof; ornamental terra cotta; interior tile; steel sash and trim; maple, marble, tile and concrete floors; vaults; ventilators; vapor vacuum heat, \$10,000; conduit system of lighting; Henrik Wallin, Archt., 23 Abercorn St., Savannah; bids opened Aug. 2.

Ky., Blackey—Stuart-Robinson College will erect dormitory; 2 stories; brick; R. H. Hunt, Archt., James Bldg., Chattanooga, Tenn. (Previously noted.)

Ky., Crestwood—Consolidated School Dist. Trustees will erect high school; \$10,000 bonds voted.

Ky., Farmerville—Union Parish School Board plans to erect school and repair present structure; election on \$35,000 bonds.

Ky., Owensboro—Board of Education, J. R. Laswell, Chrmn., Bldg., Comm., will erect Eastern Colored School; \$18,000 to \$20,000; 2 stories and basement; 72x60 ft.; 6 rooms; brick; stone trim; A. F. Hussander, Archt., 646 Clerk St., Chicago; bids opened. (Lately noted.)

La., Basile—Evangeline Parish School Bd., Villa Platte, will erect high school; \$50,000 bonds available. (Lately noted.)

La., Baton Rouge—Louisiana State School for Blind, A. H. Caldwell, Supt., will receive bids until July 10 to erect 2-story

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brick building; \$50,000; plans and specifications at office Favrot & Livaudais, Archts., Hibernia Bank Bldg., New Orleans.

La., Jonesville—Cutahoula School Dist. No. 5 votes July 6 on \$75,000 bonds. Address School Board.

La., Lake Charles—Sisters of Blessed Sacrament will erect convent buildings; Diboll & Owen, Archts., New Orleans.

La., New Orleans—School Board will erect \$215,000 school, St. Claude and Alder Sts.; 3 stories; 240x240 ft.; reinforced concrete; F. A. Christy, Archt.; bids opened.

La., St. Tammany—School Board authorized election on \$30,000 bonds.

La., Shreveport—Caddo Parish School Board called election July 2 in School Dist. No. 1 on \$1,000,000 bonds.

Md., Baltimore—Loyola College will erect chemistry building, first of 5 structures, at Evergreen Junior, on Charles St.; Gothic architecture; 64x147 ft.; 2 and 3 stories; stone, alternate on brick; slate roof; terracotta, alternate on brick; slate roof; terrazzo floors; tile wainscoting heating not in general contract; Otto G. Simonson, Archt., Md. Casualty Tower; bids opened June 30. (Previously noted.)

Md., Waldorf—County Board of Education, F. B. Gwynn, Supt., La Plata, will erect \$16,000 school; 7 rooms; frame or hollow fireproof tile; composition shingle roof; wood floors; Waterman-Waterbury heating and ventilating system or similar.

Miss., Clinton—School Trustees, W. L. Lewis, Prest., receive bids until July 10 at office Emmett J. Hull, Archt., Daniel Bldg., Jackson, to erect additions, alter and install heating and plumbing in school; plans and specifications at office architects.

Miss., Cruger—Consolidated School Dist. Trustees will receive bids until July 7 at office G. H. Love, Co. Supt. of Education, Lexington, to erect brick school; plans and specifications at office Raymond B. Spencer, Archt., Goodwyn Institute Bldg., Memphis, Tenn.

Miss., Greenville—School Board will receive bids until July 3 to erect and remodel schools; plans and specifications at office T. J. Harvey & Co., Archts., Hinds and Belaire Sts.

Miss., Gunnison—School Board will receive bids until July 6 to erect building; plans and specifications at office Frank R. McGeoy, Archt., Greenwood.

Miss., Hattiesburg—Leaf River Consolidated School District will vote July 5 on bonds not exceeding \$50,000, to erect school and teacherage. Address Forrest County Bd. of Supervisors.

Mo., Bolivar—Southwest Baptist College will erect \$35,000 dormitory; 40x140 ft.; frame and fireproof corridors and stairs; tar and gravel roof; wood floors; steam heat; ventilators; Earl Hawkins & Co., Archts., 400 McDaniel Bldg., Springfield; owner builds. Address Mr. Stufelbaum, Bolivar. (See Mchly. Wanted—Dormitory Equipment: Kitchen Equipment.)

Mo., Columbia—University of Missouri, Edw. E. Brown, Bus. Mgr., will receive bids until July 17 to erect \$250,000 hospital; fireproof; promenade tile roof; metal doors; terrazzo and linoleum floors; hot water heat; elevator; plans and specifications at office Jamieson & Spearl, Archts., Arcade Bldg., St. Louis. (Lately noted.)

Mo., Kingsville—School Dist. Trustees will erect high school; will vote on bonds.

Mo., Lexington—Central College Board of

Trustees will erect \$100,000 dormitory; accommodate 100.

Mo., Warrensburg—Pleasant Grove, Liberty, Elm, Fairview and Basin Knob communities will vote on bonds to erect high school. Address Johnson County Board of Education.

N. C., Albemarle—County Board of Education will erect 5 schools in Aquadale, Endy, Kirk and Albemarle Districts; three of brick; 6 to 8 rooms and auditorium; two colored schools of 2 rooms each; also teacherage.

N. C., Aquadale—County Board of Education, Albemarle, will erect school. (See N. C., Albemarle.)

N. C., Asheville—City Board of Education, W. L. Booker, Supt., will expend \$50,000 to improve and erect additions to schools.

N. C., Boone—Appalachian Training School will erect \$150,000 administration and academic building; H. A. Underwood, Engr., 225 Forest Rd., Raleigh.

N. C., Battleground—Guilford County Board of Education, T. R. Foust, Supt., will erect school; 6 rooms and auditorium. (See N. C., Greensboro.)

N. C., Chapel Hill—Sigma Chi Fraternity, University of North Carolina will erect fraternity house; Milburn, Heister & Co., Union Savings Bank Bldg., Washington, D. C., and Durham, N. C.

N. C., Duke—Duke School Dist. Trustees will erect high school; 18 rooms and auditorium to seat 900; \$75,000 bonds voted.

N. C., Dundarrach—Hoke County Board of Education, Raeford, will erect school; one-story; brick veneer; 6 classrooms and auditorium; Jesse Gibson, Chrmn. Bldg. Comm., Dundarrach; Jas. F. Gause, Archt., Wilmington; bids opened June 27.

N. C., Elizabeth City—Board of Education will erect high school, graded school and colored school; 2 fireproof; brick and stone; other frame; composition and wood floors; steam heat; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington, D. C. and Durham, N. C.; Miller Engineering Co., Norfolk, Va., is lowest bidder. (Lately noted.)

N. C., Fremont—Public School Comm., J. B. Lane, Chrmn., will erect \$175,000 graded school; Benton & Benton, Archts., Wilson.

N. C., Greensboro—Guilford County Board of Education, T. R. Foust, Supt., will erect \$35,000 school at Pleasant Garden; 2 stories; brick; 13 classrooms and auditorium to seat 300; 4-room addition to school at Pomona; accommodate 140; school east of Battleground; 6 rooms and auditorium; 2 negro schools, one in Jacksonville and other in eastern part of city.

N. C., Hookerton—County Board of Education, B. W. Edwards, Chrmn., Snow Hill, will receive bids until July 15 to erect high school; \$50,000; 10 rooms; plans and specifications at offices Liston L. Mallard, Archt., Kinston, and Willard G. Rogers, Asso. Archt., Charlotte; also office Mr. Edwards, Snow Hill. (Lately noted.)

N. C., Lincolnton—Trustees, Dr. I. R. Self, Chrmn., will receive bids until June 30 to erect high school; plans and specifications at office Board of Trustees, Lincolnton, Jas. A. Salter, Archt., Raleigh, and at Chamber of Commerce, Charlotte; obtainable from architects. (Lately noted.)

N. C., Macclesfield—Edgecombe County School Board, R. E. Sentelle, Supt., Tarboro, will erect high school; \$25,000; J. M. Kennedy, Archt., Raleigh; bids opened June 29. (Lately noted.)

N. C., Pleasant Garden—Guilford County

Board of Education, T. R. Foust, Supt., will erect \$35,000 school. (See N. C., Greensboro.)

S. C., Anderson—School Trustees, Dist. No. 17, W. P. Wright, Secy., will erect boys' high school; \$80,000; 175x70 ft.; ordinary construction; asphalt built-up roof; rift pine and maple floors; steam vacuum vapor heat; electric lights; Casey & Fant, Archts., 112 N. Main St.; bids opened about July 15. (Lately noted.)

S. C., Walstonburg—County Board of Education, B. W. Edwards, Chrmn., Snow Hill, will receive bids until July 15 to erect high school; 10 rooms and auditorium; plans and specifications at office G. Lloyd Preacher & Co., Archts., Raleigh, N. C., and Atlanta and Augusta, Ga., office of Mr. Edwards, Snow Hill, and Builders' Exchanges at Charlotte, N. C., Atlanta, Ga., and Columbia, S. C. (Lately noted.)

Oka., Davis—School Board will erect school and gymnasium; \$35,000 bonds voted.

S. C., Bamberg—Trustees, School Dist. No. 14 plan high school; election on \$35,000 bonds.

S. C., Denmark—Voorhees College plans several buildings.

Tenn., South Pittsburg—School Board will \$40,000 grammar school; 11 classrooms and auditorium; W. H. Sears, Archt. (Lately noted.)

Tex., Brady—Brady School Dist. Trustees plan high school; election July 3 on \$40,000 bonds.

Tex., Caldwell—School Board, D. L. Alford, Prest., will erect fireproof school; C. H. Page & Bros., Archts., Austin; bids opened.

Tex., Decatur—School Board, C. P. Gettys, Secy., will erect building; 2 stories and sub-story; brick; C. H. Leinbach, Archt., Deere Bldg., Dallas.

Tex., Devine—School Board will erect building; Ralph Cameron, Archt., San Antonio; bids opened.

Tex., El Paso—El Paso County Board of Education will erect following schools: Concordia Dist., \$53,000; Vinton Dist., \$10,000; San Elizario Dist., \$9000; plans election on \$50,000 bonds in Ysleta Dist. to erect school.

Tex., Galveston—City votes July 29 on \$1,000,000 school bonds; Chas. A. Keenan, Mayor. (Lately noted.)

Tex., Littlefield—School Board will erect brick addition to building; \$25,000 bonds voted. (Lately noted.)

Tex., Marathon—Marathon Independent School Dist. Trustees will erect building; \$20,000 bonds available.

Tex., Palm Gardens—School Board will erect 2 buildings; brick and concrete; M. L. Waller & Co., Archts., San Antonio.

Tex., Port Arthur—Port Arthur Independent School Dist. votes July 1 on \$675,000 bonds for improvements to include wings to high school for manual and physical training, addition to DeQueen School, etc. (Lately noted.)

Tex., San Elizario—El Paso County Board of Education, El Paso, will erect school. (See Tex., El Paso.)

Tex., Sherman—School Board, O. D. McReynolds, Prest., will receive bids until July 1 to erect addition to high school; fireproof; plans and specifications at office C. H. Page & Bro., Archts., Austin. (\$100,000 bonds lately noted voted.)

Tex., Tenaha—Independent School Dist. voted \$10,000 bonds to supplement \$26,000 bonds already available. Address Dist. School trustees.

Tex., Vinton—El Paso County Board of Education, El Paso, will erect school. (See

In writing to parties mentioned in this department, it will be of advantage to all concerned that the Manufacturers Record is mentioned.

Tex., El Paso.)

Tex., Ysleta—El Paso County Board of Education, El Paso, plans election on \$50,000 bonds to erect school. (See Tex., El Paso.)

Va., South Hill—School Board, C. B. Scoggin, Clk., will erect high school; 1 story and basement; 10 classrooms and auditorium; brick and concrete; tin roof; maple and concrete floors; rolling partitions; wire glass; hot air heat; bids opened. (Lately noted.)

W. Va., Clarksburg—Clark Dist. School Board, A. P. Stewart, Prest., will receive bids until July 3 to erect school at Norwood; \$50,000; 15 rooms; plans and specifications at office Stephen W. Ford, Archt., Latstetter Bldg.

W. Va., Parkersburg—City votes August 3 on \$650,000 bonds to erect schools and additions to present buildings. Address Board of Education. (Lately noted.)

Stores.

Ala., Birmingham—Joe Stead will erect \$14,000 brick building, 5403 First Ave.

Ala., Sylacauga—Batson Grocery Co., E. O. Batson, Prest., will erect store.

Ala., Sylacauga—S. P. Hagan will erect building on Broadway.

Ark., Fort Smith—Morris-Morton Drug Co., will erect store on Rogers Ave. between 4th and 3rd Sts.; 2 stories and basement; brick; A. Klingensmith, Archt.

Ark., Little Rock—Ault & Burden will erect 2-story brick veneer building, 401-05 W. Capitol Ave.; \$30,000.

D. C., Langdon—Fleishmann Co. will erect building; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington; bids about July 10.

Fla., St. Petersburg—E. E. Weaver & Sons will erect store on 3rd St., south at 10th Ave.; 1 story; 50x100 ft.; concrete block.

Ga., Atlanta—A. H. Harper will erect \$20,000 store, W. Peachtree and 10th Sts.; 1 story; brick.

Ga., Atlanta—A. G. Rhodes & Son will erect \$25,000 building, Luckie and Cone Sts.; 3 stories and basement; brick.

Ga., Atlanta—J. H. Ewing & Sons will erect 3 stores; brick; ornamental fronts.

Ga., Atlanta—Alec. and Jno. Harper will erect 3 stores.

Ky., Paducah—Saunders A. Fowler will erect 2-story brick building on Broadway near 7th St.; 28x115 ft.

Mo., Joplin—Joplin Supply Co. will complete 5-story building; concrete and brick veneer.

Mo., Kansas City—E. E. Williams will erect \$13,000 building, 1616 E. 78th St.

Mo., Kirksville—M. C. Shryack and C. C. Givens plan 3-story store, W. Washington St.; \$100,000.

N. C., Charlotte—Efird Department Store, J. B. Efird, Prest.-Mgr., will erect \$500,000 building on N. Tryon St.; 5 stories and basement; 99x188 ft.; steel and hollow fireproof tile; tile, hardwood and reinforced concrete floors; interior finish of birch wood; tile and plate glass front; Barrett roof; steam heat; electric lights; 3 passenger and 1 freight elevators; Louis H. Asbury, Archt. bids opened July 10. (Lately noted.)

N. C., Winston-Salem—H. R. Starbuck will erect store, 4th and Marshall Sts.; 2 stories; 30x90 ft.; brick; plate glass front.

Tenn., Chattanooga—Fox Bros. will erect 3-story building, King St. and Railroad Ave.; \$30,000; 62x130 ft.; brick and concrete; W. H. Sears, Archt.

Tenn., Chattanooga—Jno. C. Twinan plans \$130,000 store and apartment building, Five Points and W. 9th Sts.; 3 stories; brick.

Tenn., Knoxville—Jas. G. Sterchi will erect \$50,000 building on Jackson Ave.; 3 stories; brick.

Tenn., Memphis—Thos. B. Jones will erect block of 5 stores on Union Ave.; 108x80 ft.; 1-story.

Tenn., Memphis—S. Watkins Overton will erect store and offices, Union Ave. and 3rd St.; 74x142 ft.; 2 stories; Chas. Deas, Archt.

Tex., Dallas—Dudley Mayer will erect \$20,000 building, 1319 Young Street; two stories; 35 1/2x80 ft.; brick; Foohee & Cheek, Archts.

Tex., San Antonio—J. M. Booth will erect \$15,000 store and dwelling on Austin St.; 2 stories; brick and stucco.

W. Va., Richwood—S. L. and Earl Duffield will erect 2-story brick store and apartment building on Main St.; 30x50 ft.

Theaters.

Ga., Augusta—Boardman Bros. will expend \$25,000 to remodel Grand Theater; 4 stories; terra cotta and steel.

La., New Orleans—Le Petit Theater will erect \$20,000 building; 2 stories; brick; Armstrong & Koch, Archts.; receiving bids. (Previously noted.)

Md., Crisfield—Henry W. Conant, Chincoteague, Va., Lee Insley and Frank White, both Salisbury, are interested in erection of \$60,000 theater; 2 stores.

Mo., Kansas City—Geo. Boden, 3616 Indiana Ave., will erect theater, hall and store building; 2 stories and basement; 101x135 ft.; brick; stone trim; J. F. Thompson, Archt., Massachusetts Bldg.; day labor.

Warehouses.

Ala., Anniston—Southern Mill Corp., Otto Lastoch, Gen. Mgr., will erect 72x72 ft. warehouse, 5 cottages and 225 ft. extension to plant at Oxford.

Ala., Birmingham—Perry Bros. will erect \$12,000 brick and concrete warehouse, 2321 Morris.

Mo., Kansas City—J. W. Hood will erect \$10,000 warehouse, 2501-03 Southwest Blvd.; one-story.

Ky., Jackson—Jackson Lumber & Supply Co., W. C. Cole, Mgr., will erect \$40,000 building for warehouse, office and sheds; 1 and 2 stories; frame and brick; private plans.

Tenn., Springfield—Brandon & Dozier will rebuild warehouse damaged by fire.

Va., Richmond—Richmond-New York Steamship Co., will erect warehouse and office at Dock and Canal Sts.; L. P. Hartsook, Archt.

BUILDING CONTRACTS AWARDED

Apartment Houses.

D. C., Washington—J. H. de Sibour, Edmunds Bldg., is preparing plans for \$600,000 building, 16th and M Sts., N.W.; 90 apartments; 8 stories and basement; reinforced concrete and two-way tile; slag roof; hardwood floors; hollow fireproof and interior tile; ornamental terra cotta; metal doors; wire glass; mail chute; limestone; brick; Dunham System heat, 2 smokeless boilers; 3 electric elevators; R. P. Whitty Co., Contr., Union Trust Building.

Fla., Miami Beach—Mrs. Anne R. Chrichton; 2-story building, 408 Ocean Drive; \$10,000; 37x41 ft.; concrete walls; built-up tile roof; pine and tile floors; electric wiring; Jno. C. Williams, Corp., Archt.-Contr., 150 E. Second St.

Ga., Atlanta—J. G. Mangham; \$12,000 building, 113 Highland Ave.; 2 stories; 40x100 ft.; frame; composition roof; J. A. Mabry, Contr.

Ga., Atlanta—A. L. Smith, 55 Havell Blvd.; \$50,000 building, 428 N. Boulevard; 55x114 ft.; 2 stories; brick veneer; tile roof; hardwood floors; steam heat; electric lights; 12 apartments; E. F. Culpepper, Contr., 427 Gordon St.

Ga., Atlanta—Jos. A. McCord, Federal Reserve Bank; \$40,000 building, 77-79 7th St.; 68x62 ft.; 3 stories and basement; stone foundation; brick veneer and hollow tile; tar and gravel roof; concrete and hardwood floors; steam heat, \$4000; Hentz, Reid & Adler, Archts.; Flagler Co., Contr., 34 Cone Street.

La., New Orleans—Greater New Orleans Homestead Assn.; duplex apartment, Broadway and Zimpel Sts.; \$12,000; Gerald Netter, Contr.

La., New Orleans—Mrs. Wm. S. Holmes, Security Bldg. & Loan Assn.; remodeling double duplex apartment, Peters Ave. and

Danneel St.; \$14,700; Cooper & Sperier, Contrs.

N. C., Charlotte—Mrs. Witherspoon; \$14,000 building on Carson St.; brick veneer and frame; composition shingle roof; oak and pine floors; C. C. Hook, Archt., Trust Bldg.; E. H. Clement Co., Contr.

N. C., Charlotte—Scottish Rite Cathedral Assn., Dr. Witherspoon, Chrmin., Bldg. Commission; \$14,000 building, W. Hill St. near Tryon St.; brick veneer and frame; composition shingle roof; oak and pine floors; C. C. Hook, Archt., Trust Bldg.; E. H. Clement Co., Contr.

Tex., San Antonio—M. Milgrom; building at Evergreen St. and Main Ave.; frame; 7 apartments; David A. Lown, Archt.; Shane & Dickey, Contrs.

Association and Fraternal.

Ala., Birmingham—Negro Masons of Alabama, W. T. Wood, Grand Master, Tuskegee Inst.; \$250,000 temple, 17th St. and 4th Ave.; 4 stories and basement; 66x140 ft.; fireproof; steel frame; composition roof; tile, marble and hardwood floors; steam heat; electric passenger elevator; Taylor & Persley, Archts., Tuskegee Inst.; Windham Bros. Construction Co., Contr., Birmingham.

Bank and Office.

La., New Orleans—Horace Williams, \$400,000 medical building, Prytanis and Aline Sts.; 8 stories; 59.6x144.2 ft.; fireproof; limestone base; reinforced concrete; terra cotta and brick; marble and hardwood floors; stores, restaurant, etc., on first floor; Col. W. L. Stevens, Archt.; Doullut & Williams, Contrs.

Md., Baltimore—Waldo Hack, St. Paul and Saratoga Sts.; fireproof building, St. Paul and Pleasant Sts.; 4 stories; 23x75 ft.; slag roof; tile and concrete floors; \$40,000; Wight & Lockhart, Archts., Munsey Bldg.;

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Consolidated Engineering Co., Contractor, Calvert Bldg.

Oklahoma City—Federal Reserve Bank of Kansas City; \$500,000 building for Okla. City Branch; 3 stories and basement; 75x140 ft.; brick; stone trim; Graham, Anderson, Probst & White, Archts., 60 E. Jackson Blvd., Chicago; Selden Breck Construction Co., Contr., St. Louis, Mo.

Oklahoma, Pawhuska—Citizens National Bank, E. S. Shidler, Vice-Prest.; \$200,000 building; 5 stories and basement; 50x130 ft.; fireproof; brick; stone trim; reinforced concrete; composition roof; steam heat; electric wiring; electric elevators; tile and concrete floors; A. H. Flickley, Archt., 823 Gloyd Bldg.; Geo. M. Bliss Construction Co., Contr., 608 Lathrop Bldg., both Kansas City.

Churches.

D. C., Washington—Takoma Park Presbyterian Church; \$65,000 building at Tulip and Maple Sts.; Milburn, Heister & Co., Union Savings Bank Bldg.; Arthur L. Smith & Co., Contrs.

Md., Baltimore—Zion German Lutheran Church, Lexington and Holliday Sts.; \$20,000 building; 2 stories; brick and Kibb brown stone; tile roof; oak floors; extend steam heating system; 2 stores, caretaker's quarters on second floor, addition to parish house providing library, bedrooms, etc., for pastor; Theo. Wells Pietsch, Archt., American Bldg.; Hicks, Tase & Norris, Contrs., 106 W. Madison St.

Mo., Liberty—First Baptist Church, Rev. O. R. Mangum, Pastor; \$98,000 building; J. H. Felt & Co., Archts., 800 Grand Ave. Temple, Kansas City; Lehr Constr. Co., Contr.; separate contracts for heating, plumbing and wiring.

City and County.

Md., Baltimore—Service Station—Board of Awards, Mayor Wm. F. Broening, Prest., alterations and additions to service building, Northern Police Station; 32x100 ft.; Otto Adams, Archt.; A. F. Fedili Co., Continental Bldg., Contrs., at \$17,200.

Tenn., Memphis—Auditorium—City, R. R. Ellis, Chrmn., Auditorium-Market House Coms.; \$1,250,000 building; 350x350 ft.; 5 stories and basement; reinforced concrete and structural steel; composition, tar and gravel roof; concrete, hardwood and wood block floors; hollow fireproof tile; ornamental terra cotta; metal doors; wire glass; vault lights; elevators; \$76,000; C. O. Pfell, Archt., Union & Planters Bank Bldg.; Geo. Awsumb, Asso. Archt., both Memphis; Wm. B. Ittner, Consdg. Archt., St. Louis; James Alexander Constr. Co., Contr.; heating, \$110,000; Fischer Heating Co.; plumbing, \$47,000. Pritchard Bros., all Memphis; wiring and electrical equipment, \$92,500, Newberry Electrical Co., St. Louis.

Dwellings.

La., Monroe—Underwood Contracting Corp., New Orleans, has contract to erect \$14,000 dwelling; slate roof; tile bath.

La., Monroe—Travis Oliver, Prest., Central Bank & Trust Co.; \$14,000 dwelling; 2 stories; terra cotta, tile and brick veneer; slate roof; pine and oak floors; hot air heat; L. Milton King and William Drago, Archts.; Underwood Contracting Corp., Contr., New Orleans.

La., New Orleans—Lucien Vivien, Security Bldg. & Loan Assn.; 4 double cottages, Hospital and Tonti Sts.; \$10,800; William B. O'Brien, Contr.

La., New Orleans—Excelsior Homestead Assn.; 2-story duplex dwelling, Urania and Coliseum Sts.; \$7500; Peter Rausch, Contr.; also \$6745 frame bungalow, Genois and Bau-

din Sts.; Connell & Moore, Contrs.

La., New Orleans—Mrs. Margaret Farwell; 1-story dwelling, 1455 Arabella St.; Morgan D. E. Hite, Archt., Hibernia Bldg.; Jos. Ulmer, Contr.

La., New Orleans—Geo. W. Gunn, Orleans Homestead Assn.; 2-story double dwelling, S. Genois and Bank Sts.; \$11,072; Samuel Lathan, Contr.

La., New Orleans—A. L. Hackatt; dwelling, 4542 Valmont St.; \$27,000; A. P. Bob, Contr.

La., New Orleans—Mrs. C. Leidenheimer; duplex dwelling, Louisiana Ave. and Delachaise St.; \$10,500; J. F. Charlton, Contr.

La., New Orleans—Union Homestead Assn., \$4500 bungalow, Catina and Taylor Sts.; E. W. McKee, Contr.; also bungalow, Neron Pl. and Burdette St.; \$9250; A. W. Drennan, Contr.

Md., Baltimore—Geo. C. Thomas; \$15,000 dwelling, Charles St. near Milbrook Ave.; 2½ stories; hollow tile; 46.2x46.2 ft.; slate roof; steam heat; Edward L. Palmer, Jr., Archt., 513 N. Charles St.; R. B. Mason, Contr., 308 W. Madison St.

Md., Baltimore—Rena Trust Co.; \$19,000 dwelling, 8 E. 37th St.; 2 stories; brick; 42x32.8 ft.; steam heat; T. W. Pietsch, Archt.; American Bldg.; Fraim Bros. & Haigley, Contrs., 18 Clay St.

Md., Baltimore—Geo. T. Phillips, 210 Goodwood Gardens, Roland Park; \$15,000 dwelling, Wendover Rd. near Charles St., Guilford; 2½ stories; brick; 32x32 ft.; slate roof; steam or hot water heat; Chas. M. Anderson, Archt., 324 N. Charles St.; Southern Steel Constr. Co., Contr., 19 E. Lombard St.

Md., Baltimore—Isaac Mindel, 1737 N. Benthalou St.; 4 dwellings, 3933-39 Boarman Ave.; 2 stories; brick; 17.6x30 ft.; slate roofs; steam heat; \$10,000; S. Russell, Archt., 11 E. Lexington St.; A. Wolman, Contr., 34 N. Montford Ave.

Md., Baltimore—Calvin D. Swank, 101 E. Woodland Ave.; \$10,000 dwelling, 3504 Edgewood Rd.; 2 stories; frame; 8 rooms; Herbert C. Alken, Archt., 4115 Ridgewood Ave.; Henry A. Knott & Co., Contrs., 2101 N. Calvert St.

N. C., Charlotte—Charles Stroupe; \$10,000 dwelling, 1 Louise Ave.; 2 stories; brick and wood; J. D. Stroupe, Archt.-Contr.

Tenn., Memphis—Mrs. Victoria Scherer; \$11,000 dwelling, Galloway Ave., Overton Park; brick veneer; Charles Deas, Archt.; J. A. Finchett, Contr.

Tenn., Memphis—A. Wolff; \$12,000 bungalow, Melrose and Vinton Sts.; stone and brick; Charles Deas, Archt.; J. A. Finchett, Contr.

Tex., San Antonio—Judge Bobt. W. B. Terrell; residence in Arcadia Pl., Terrell Hills; brick and cement stucco; Ernest Scrivener, Contr.

Va., Portsmouth—J. M. Overton; \$10,000 dwelling, Dinwidde St. and Crawford Pl.; 2 stories; frame; R. B. Salter, Contr.

W. Va., Flemington—J. C. Taylor Coal Co.; 50 miners' houses between Flemington and Galloway; J. F. Evans Lumber Co., Contr., 423 Empire National Bank Bldg., Clarksburg.

Government and State.

Ga., Fort Benning—Warehouses—Construction Quartermaster will erect 2 warehouses; 168x80 ft. each; concrete foundations, floors and platforms; brick and hollow tile walls; metal covered wire doors; steel sash; wire glass; wood sheathed roof, built-up roof; Batson-Cook Co., West Point, Contr., at \$27,400.

Hospitals Sanitariums Etc.

N. C., Charlotte—Drs. J. P. Matheson, C. N. Peeler, H. L. Sloan and H. C. Shirley; \$70,000 eye, ear, nose and throat clinic, 7th and Tryon Sts.; 3 stories and basement; 40x90 ft.; fireproof; brick and concrete; granite to first floor, terra cotta or limestone above; L. L. Hunter, Archt.; Goode Construction Co., Contr., will let separate contracts for plumbing, heating, electrical work and elevator.

Hotels.

Ga., Dalton—H. J. Smith; \$115,000 hotel; 4 stories and basement; reinforced concrete; Barrett roof; tile and concrete floors; low pressure steam heat; electric lights; electric passenger elevator; A. Ten Eyck Brown, Archt., Forsyth Bldg., Atlanta; McDevitt-Fleming Co., Contr., Chattanooga, Tenn.

La., New Orleans—Leon Jacobs and A. D. Danziger, Liverpool, London & Globe Bldg., will erect \$250,000 hotel and stores; 4 stories; steam heat; Weiss & Dreyfous, Archts.; contract in about 60 days. (Previously noted.)

Mo., St. Joseph—Lee Broom; 6-story hotel; \$100,000; Lawhon Constr. Co., Contr.

Miscellaneous.

Tex., Clarendon—Studio—J. R. Bartlett; studio on 8. Kearney St.; 25x70 ft.; brick and tile; skylight and show windows; Speed Bros., Contrs.

Tex., Beaumont—Fair—City, Geo. J. Roark, Mgr.; auditorium at South Texas State Fair Grounds; 90x179 ft.; steel, reinforced concrete and brick; F. W. Steinman & Sons, Archts.; Houston Structural Steel Co., steel and steel sash; bids for other portion of building rejected.

Schools.

Ala., Greenville—City Board of Education, O. A. Lane, Prest.; \$30,000 high school; 12 rooms and auditorium; brick veneer; composition shingle roof; pine floors; steam heat; knob and tube and conduit systems of lighting; plans by J. Platt Roberts, State Agricultural Draftsman, Montgomery. Address T. H. Wainwright, Contr., Atmore.

Ala., Selma—School Board, W. R. Nelson, Prest., will remodel and erect addition to Francis Thomas School; \$30,000; 3 rooms and auditorium to seat 400, kitchenette, teachers' rest room; improve plumbing and steam heating plant; Frank Lockwood, Archt.; T. A. Monk, Contr., both Montgomery.

Ga., Cairo—Cairo School Dist. Trustees, W. B. Rodenberry, Secy.-Treas.; \$50,000 school; brick and hollow fireproof tile; Carey roof; rift pine and concrete floors; metal doors; wire glass; steam heat; electric lights; ventilators; 20 rooms and auditorium to seat 750; Lloyd Greer, Archt., Valdosta; M. S. Stewart, Asso. Archt., Cairo; H. H. Brown, Contr., Dothan, Ala.

Ky., Hopkinsville—Bethel Woman's College; \$10,000 addition; 100x36 ft.; brick; slate roof; pine floors; hot water heat; electric lights; Forbes Mfg. Co., Contr.

La., Lafayette—Southwestern Louisiana Industrial Institute; \$54,230 dormitory; 116-1x75 ft.; concrete foundation; brick walls; slate roof; wood and concrete floors; Favrot & Livaudais, Archts., New Orleans. Address Knapp & East, Contrs., Lake Charles.

Md., Baltimore—Board of Awards, Mayor Wm. F. Broening, Prest., City Hall; fire escapes at Schools Nos. 1, 3, 5, 8, 15, 23, 25, 28, 30, 33, 40, 42, 43, 81, 92, 93, 106, 108 Branch, 110, Bank Street School, Highlandtown, and Canton School No. 1; \$47,437; steel; Francis E. Tormey, Archt., 3411 Beech

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Ave.; Wm. L. Noe Co., Contr., 2nd and Oxford Sts., Philadelphia, Pa.

Md., Baltimore—Johns Hopkins University, Dr. Frank J. Goodnow, Prest.; alumni memorial dormitory, first unit of 4 dormitories at Homewood; \$375,000; 323x131 ft.; 3 stories and basement; Colonial type; brick; Edw. L. Palmer, Jr., Archt., 513 N. Charles St.; Frainie Bros. & Haighley, Contrs., 18 Clay St.

Miss., Jackson—Board of Education; negro school; \$16,450; 1-story; 144x58 ft.; brick; composition roof; wood floors; electric lights; N. W. Overstreet, Archt.; E. H. Currie and N. A. Dyer, Contr.

Miss., Summit—Board of Education; \$21,604 high school; Kramer & Lindsay, Archts.; Kress Bldg., Jackson; T. L. Reed & Son, Contrs., Belzoni; Jas. G. McKendrick, New Orleans, heating and plumbing. \$4100.

Mo., Kansas City—Board of Education; additions to Yeager School, 19th St. and Indiana Ave., and Border Star School, 63rd St. and Wornall Rd.; L. Breitag & Son, contrs. for former at \$118,033; Arthur McKinley, heating and ventilating. \$17,896; Crescent Electric Co., wiring, \$5400; E. L. Winn, contr. for latter at \$15,305; MacMahon Co., heating and ventilating, \$4530.

Mo., Kearney—Board of Education, J. E. Matthews, Secy.; \$40,000 high school; brick and frame; composition roof; wood floors; stone trim; Chas. A. Smith, Archt., Finance Bldg., Kansas City; G. A. Rector, Contr., St. Joseph.

Mo., Steffenville—School Board will erect \$25,000 building; Henry Stover, Contr., Canton.

N. C., Thomasville—School Board, Jno. R. Myers, Chrmn.; \$152,500 high school; 2 stories; brick, reinforced concrete and hollow fireproof tile; ornamental terra cotta; metal doors; built-up roof; reinforced concrete floors; wire glass; steel sash and trim; Harry J. Simons, Archt., Greensboro; C. V. York Constr. Co., Contr., Raleigh; W. W. Dick, Greensboro, heating, \$20,920; Crutchfield Plumbing Co., Greensboro, plumbing, \$12,990.

N. C., Winston-Salem—Forsyth County School Board, W. B. Speas, Supt.; schools in Old Richmond and Vienna townships; \$26,739 each; 2 stories; 66x103 ft.; brick; asbestos roofs; pine floors; hot air heat; 7

classrooms, library and auditorium to seat 400; W. C. Northup, Archt.; Jno. S. Day, Contr.

S. C., Central—School Trustees will erect \$25,000 building; Jas. C. Hemphill, Archt., Greenwood; R. G. Shock, Contr., Easley; Poe Hardware & Supply Co., Greenville, heating and plumbing.

S. C., Columbia—Columbia College, Dr. J. C. Guilds, Prest., Vera Thomas Memorial Library; \$15,000; brick and stone; J. C. Heslep, Contr.

Tenn., Chattanooga—Dept. of Education and Health, Fred B. Frazier, Commr.; Ridgefield Grammar School; \$28,000; auditorium to seat 800; Mark Wilson, Contr.

Tenn., Kingsport—Board of Education; \$104,000 high school; Pyle Bros., Contr.

Tex., Austin—St. Edwards College will rebuild Holy Cross dormitory recently damaged by storm; Giesecke & Harris Archts. Littlefield Bldg., Fischer & Lamble, Contrs., both Austin; Chalkley Bros., heating and plumbing, San Antonio.

Tex., El Paso—School Board, Chas. S. Ward, Chrmn.; 12-room fireproof addition; \$40,000; J. S. Patten, Supvg. Archt.; Worthington Constr. Co., Contr.

Tex., Groesbeck—School Board, W. H. Jones, Prest.; \$30,000 addition; 46x70 ft.; fireproof; tar and gravel roof; edge granular floors; vapor heat; electric lights; C. H. Leinbach, Archt.; Christy Dolph Co., Contr., both Dallas.

Tex., Waskom—School Board, E. W. Farmer, Secy.; \$34,568 school; 2 stories; brick and tile; C. G. Lancaster, Archt., Marshall; McMichaelson Constr. Co., Contr., Shreveport, La.

Va., Clarendon—Catholic School, Father Lackey in charge; \$26,000 parochial school; Milburn, Heister & Co., Archts., Union Savings Bank Bldg.; J. J. Galvin, Contr., 1247 New Hampshire Ave., both Washington, D. C.

Va., Graham—School Board will erect building on Hardy Hill; \$18,000; W. F. Baugh, contr. on force account basis.

Stores.

Fla., St. Petersburg—J. D. Pearce; \$20,000 store and apartment building, 820 Central Ave.; 2 stories; 40x100 ft.; brick and

steel; Hollady & Rountree, Contrs., LaPlaza Theater Bldg.

Md., Baltimore—Henry S. Ashman, Inc.; \$25,000 store, warehouse and garage, Frederick Rd. nr. Pennsylvania R. R., Catonsville; 1 story; brick; concrete trim; Walter M. Gieske, Archt., Gunther Bldg.; G. Walter Tovell, Contr., 403 Monument St.

N. C., High Point—Minnie Broadhurst; 3-story store and apartment building, Main St.; 50x95 ft.; \$30,000; J. L. Crouse, Contr., Greensboro.

N. C., Winston-Salem—R. J. Reynolds Realty Co., Geo. W. Orr, Prest., Treas.; store and office building, 4th and Cherry Sts.; 23x100 ft.; concrete, steel and brick; stone trim; tile and terra cotta cornice; plate glass front on first floor; H. Machlin, Archt.; Fogle Bros., Contrs.

Va., Lynchburg—J. R. Millner Co.; building to replace structure lately noted burned; fireproof; S. S. Johnson, Archt.; Jno. P. Pettyjohn, Contr.

Va., Richmond—Swansboro Furniture Co., Fred. W. Smith, Prest., 2701 Hull St.; 14,500 store; 44x100 ft.; brick and hollow fireproof tile; Barrett roof; wood and concrete floors; electric lights; H. Carl Messer Schmidt, Archt., American Natl. Bank Bldg.; W. M. Knowles, Contr.

Warehouses.

N. C., Charlotte—Textile Mill Supply Co., Fred T. Glover, Prest., 51 N. College St.; \$60,000 warehouse and manufacturing building; 120x125 ft.; 3 stories and basement; cast iron columns; brick; mill construction; steel beams; tar and gravel roof; steel sash; maple floors; elevators; Lockwood, Greene & Co., Archts., Piedmont Bldg.; E. H. Clement Co., Contr.

Tex., Hamlin—Western Compress & Storage Co., Abilene; \$12,000 cotton warehouse; G. B. McCauley, Contr., Abilene.

Tex., McKinney—Western Compress & Storage Co., Abilene; \$20,000 cotton warehouse; G. B. McCauley, Contr., Abilene.

Tex., Sweetwater—Western Compress & Storage Co., Abilene; \$12,000 cotton warehouse; G. B. McCauley, Contr., Abilene.

Tex., Slaton—Western Compress & Storage Co., Abilene; \$12,000 cotton warehouse; G. B. McCauley, Contr., Abilene.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Automobile Accessories.—Harley C. Beard, Secy.-Treas., Auto Parts Co., Carthage, Mo.—Mfrs. catalogs, etc., of automobile accessories; view to representation.

Automobile Trucks.—Board of Awards, Richard Gwinn, City Register, Baltimore, Md.—Bids opened June 28 to furnish and deliver 2 automobile trucks to Water Dept.; Wm. A. Megraw, Water Engr.

Automatic Gate.—S. F. Chapman, 3 technical Bldg., Asheville, N. C.—To correspond with mfrs. of automatically opened gate for auto road.

Boiler.—Standard Electric Machinery Co., (Mechy. Dealers) 7 E. Hill St., Baltimore, Md.—100 H. P., HRT boiler, 100 lbs.; to pass Virginia inspection.

Boilers.—Duncan Machinery Co., (Mechy. Dealers) Dempster Bldg., 721 N. Central Ave., Knoxville, Tenn.—Jobbers prices on 60, 70, 80 and 100 H. P. locomotive type boiler, good and insurable at 120 lbs. steam pressure; also Scotch marine type or internally fired return tubular boiler, mounted on skids; any boiler will answer that does not require a furnace.

Boiler and Engine Room Supplies.—St. Luke's Hospital Assn., Jacksonville, Fla.—Catalogs of all kinds of boiler and engine room supplies.

Bottles, etc.—Lexington Lime Cola Bottling Co., A. S. Montgomery, Mgr., Lexington, Tenn.—Prices on bottles and crowns and extracts.

Brake (Power Bending).—Pur. Dept., Fairmont Mining Mchy. Co., Fairmont, W. Va.—Data and prices on power bending brake, capacity for $\frac{3}{8}$ -in. material 12 ft. long.

Bridge Construction.—State Highway Commrs., Nashville, Tenn.—Bids until July 14 for 1392 ft. span bridge over Cumberland River; concrete sub-structure; reinforced concrete approach spans; Montgomery County, Federal Aid Project No. 16; 3975 lin. ft. timber piles treated; 6204.49 cu. yds. concrete; 1340 sq. yds. rock asphalt surfacing; 369,907 lbs. deformed steel bars; plans, etc., from D. Q. McComb, Ch. Engr., and Div. Engr.

Bridge Construction.—Palm Beach County Commrs., Fred E. Feno, Clk., West Palm Beach, Fla.—Bids until July 5 for Bascule

lift span with necessary approach spans to connect lift spans and present approaches across lock chamber on Lock No. 3 of Palm Beach Canal at Dixie Highway crossing in south limit of city; steel and reinforced concrete; plans, etc., from County Engr.

Bridge Construction.—Palm Beach County Commrs., Hector Harris Chrmn., West Palm Beach, Fla.—Bids until July 5 for following:

No. 19, between sections 16 and 21 T. 12 N. R. 3W; 39 ft. long; 20-ft. roadway.

No. 18, on north line sec. 2, T. 13 N. R. 1E; 20-ft. roadway.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

No. 9, between sections 14 and 15 T. 12N., R. 3W.; 8x8x2 ft.; all reinforced concrete; plans, etc., on file.

Bridge Construction.—Alamance County Commrs., Chas. D. Johnson, Chrnn., Graham, N. C.—Bids until July 3 for steel bridge over Haw River at Altamahaw; two 100-ft. spans; 37-ft. 6-in. approach; 12-ft. roadway; two sidewalks; plans, etc., from Spoon and Lewis, Engrs., Greensboro and Burlington, N. C.

Bridge Construction.—Howard and Saline Counties, and Missouri State Highway Dept., Jefferson City, Mo.—Bids about Aug. 1 for bridge across Missouri River; 3 through and 1 deck spans on pneumatic caisson foundations; \$500,000; Fred. W. Adgate, Consult. Engr., 209 S. LaSalle St., Chicago, Ill.

Bridge Construction.—State Highway Department, Montgomery, Ala.—Bids until July 20 to build highway bridge and approaches over Tombigbee River near Moscow Ferry, about 14 mi. below Demopolis; Strauss Direct Lift, consisting of one movable and two fixed spans; Scherzer Rolling Lift, double leaf bascule and one fixed spans; Waddell Cable Lift, one movable and two fixed spans; earth approaches; plans, etc., on file, from Div. Engr., State Highway Dept., Selma, Ala., and of each particular type from Strauss Bascule Bridge Co., 225 N. Michigan Ave., Chicago, Ill.; Scherzer Rolling Lift Bridge Co., Pensacola, Fla.; and Chicago, Ill.; J. A. L. Waddell, 35 Nassau St., New York; W. S. Keller, State Highway Engr.

Bridge Construction.—Lafayette County, Board of Supervs., Oxford, Miss.—Bids until July 3 for following:

Two 100-ft. bridges across openings in levee on Tallahatchie River at Tobey Tubby crossing at iron bridge in Beat No. 3.

Two spans at north end of Morrison slough bridge; plans, etc., from W. M. Woodward, Chancery Clerk.

Bridge Construction.—Calhoun County Commrs., St. Matthews, S. C.—Bids until July 6 for timber trestle bridge over Little Beaver Creek, on Columbia-Charleston highway; ten 14-ft. bents; 1760 lin. ft. treated piling; \$8000; plans, etc., from W. J. Wise, County Supvr., or State Highway Engr., Columbia, S. C.

Bridge Construction.—State Road Comsn., Charleston, W. Va.—Bids until July 11 to repair Salt Rock Bridge; Cabell County, Project No. 3066; plans, etc., on file or from H. J. Spelman, Div. Engr., Huntington, W. Va.

Bridge Construction.—Virginia State Highway Comsn., 116 S. 3rd St., Richmond, Va.—Bids opened June 27 for following:

Project No. S-218, Route No. 7, 67-ft. 2½-in. reinforced concrete bridge over Happy Creek, at Front Royal, Warren County; 236 cu. yds. concrete; 14,210 lbs. steel; plans, etc., on file or from Dist. Engr., Staunton, Va.

Bridge Construction.—State Highway Department, Jefferson City, Mo.—Bids opened June 24 for following:

Butler County, on State road from Poplar Bluff southwestward; Federal Aid Project No. 58, Section B.

Station 520 plus 34; reinforced concrete low water bridge.

Station 533 plus 40; reinforced concrete low water bridge.

Station 713 plus 98; 30-ft. I-Beam span; over Epps Drainage Ditch.

Station 740 plus 22; 30-ft. I-Beam span; over Epps Drainage Ditch.

Station 791 plus 91; 46-ft. I-Beam span; over Harville Drainage Ditch.

Station 877 plus 37; 30-ft. I-Beam span; over Harts Drainage Ditch.

Butler County, on State road from Poplar

Bluff southwestward; Federal Air Project No. 58, Section C.

Station 946 plus 60; 32-ft. I-Beam span; over Neelyville Drainage Ditch.

Station 1186 plus 89; 45-ft. I-Beam span; over Byrne Drainage Ditch; M. S. Murray, Div. Engr., Sikeston, Mo.

Burlap Bags, etc.—Dize Awning & Tent Co., 137 N. Main St., Winston-Salem, N. C.—To correspond with mfrs. of burlap, white cotton and burlap bags.

Cable Way, etc.—Sam'l. T. Williams, (Machinery Dealers) 223 N. Calvert St., Baltimore, Md.—Cable way to handle about 2 to 3 tons, length 600 ft., with electric hoisting engine.

Canning Machinery.—A. W. Neeb, 25 N. E. 2nd Ave., Miami, Fla.—To correspond with mfrs. of canning mchys.

Cars (Quarry).—The Harvey Co., 113 South St., Baltimore, Md.—Twenty 48-in. gauge, end dump quarry cars. (Mchy. Dealer.)

Cars (Side Dump).—M. B. Parker, Chattanooga, Tenn.—1-yd. capacity side dump cars, second-hand.

Cars (Side Dump).—Randle Machinery Co., Powers St. and B. & O. R. R., (Cummins) Cincinnati, O.—Ten 1½-yard Western, 24-in. gauge side dump cars.

Carpet Duster.—See Dyeing (Rug) and Cleaning Equipment, etc.

Canning Plant.—J. B. Azbill, Little Rock, Ark.—Data and prices on mchys. and equipment for canning plant; correspond with mfrs. or dealers in this equipment.

Church Furniture.—Rev. N. M. Harrison Jr., Pastor, West End M. P. Church, Greenville, N. C.—Correspond with manufacturers of church pews and furniture; nearby firms preferred on account of freight rates.

Clearing, etc.—Washington County Drainage Commrs., O. C. Kulicka, Secy., Greenville, Miss.—Bids until July 4 for clearing of Bogue Phalia and Six Mile Bayou; further information on application.

Coagulating Basin.—City of Farmville, Va., Jas. A. Davidson, Mayor.—Bids until July 10 for furnishing materials, appurtenances and labor for constructing of concrete coagulating basin, approx. 44 ft. long, 30 ft. wide, 12 ft. in depth; capacity about 120,000 gals.; David J. Howell & Son, Union Trust Bldg., Washington, D. C., Engrs.

Compressor (Air), etc.—M. B. Parker, Chattanooga, Tenn.—Belted air compressor, 150 to 250 ft. capacity; also black pipe; second-hand equipment.

Compressor (Air).—Randle Machinery Co., Power St. and B. & O. R. R., (Cummins) Cincinnati, O.—Belt driven air compressor, from 300 to 400 cu. ft. per min. capacity, with either direct connected or belted 3 phase, 60 cycle, 220 volt motor.

Condenser, etc.—Pennsylvania Equipment Co., (Mchy. Dealers) Norwood, Pa.—Second-hand 2600 to 4000 sq. ft. surface condenser complete with dry vacuum pump, hot well pump and circular pump, operating conditions 29-in. vacuum, 150 lb. steam pressure, 2 lb. back pressure, 100 degrees F. superheat.

Conveyor, etc.—Toboggan Water Slide, J. Willard Sherman, Mgr., Sulphur Springs Park, Fla.—Prices on conveyor and endless chain.

Copper (Hot Rolled).—North Carolina Lumber Co., Jos. R. Ross, V.P., Charlotte, N. C.—500 lbs. of hot rolled copper for use in valleys and for flashing, in approx. weight of 16 oz. to sq. ft., in 14-in. width in rolls of about 300 ft.

Cornice and Roofing.—Construction—Treas. of Dept., Supvg. Archt.'s Office, Washington D. C.—Bids until July 19 to restore some stone cornice and replacing of roof construction, etc., for U. S. Postoffice and Cus-

tom House at Oswego, N. Y.; plans on file or with Custodian at Oswego.

Creamery Equipment.—W. A. McGuire, Horse Cave, Ky.—Equipment, including cold storage, for large creamery.

Culvert Construction.—City, Walter H. Taylor, Director of Public Works, Norfolk, Va.—Bids opened June 28 for reinforced concrete culvert on pile foundation, across Maple Ave., between Clifton and State Sts., Berkley Ward; plans, etc., on file; David A. Decker, Water and Sewers Engr.

Dormitory Equipment.—Mr. Stoffelbaum, Southwest Baptist College, Bolivar, Mo.—Catalogs and prices on equipment for \$35,000 dormitory; 40x140 ft.

Drainage.—Long Creek Drainage District, Commrs., R. L. Thompson, Batesville, Miss.—Bids until July 10 to construct drainage system; 6¾-mi. ditch, containing 123,000 cu. yds.; plans with Bobo & Collier, Engrs., Clarksdale, Miss.

Dyeing (Rug) and Cleaning Equipment, etc.—Aaron M. Jacob, 3424 Holmes Ave., Baltimore.—Prices on 4 dry cleaning washers, 2 wet washers, 2 extractors, carpet duster.

Electrical Supplies, etc.—St. Luke's Hospital Assn., Jacksonville, Fla.—Catalogs on house electrical supplies.

Elevators.—Swansboro Furniture Co., 2701 Hull St., Richmond, Va.—Freight elevators for furniture store.

Elevator Machinery.—Standard Rice Co., W. K. Morrow, Prest., Houston, Tex.—Invite bids to furnish mchys. for 100,000 bu. capacity elevator at Memphis, Tenn.

Excelsior Making Machines.—W. J. Dabney Implement Corp. (Mchy. Dealers) 62 S. Forsyth St., Atlanta, Ga.—To correspond with mfrs. of excelsior-making machines.

Extracts.—See Bottles, etc.

Extractors.—See Dyeing (Rug) and Cleaning Equipment, etc.

Fire Alarm System.—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Bids until July 18 for fire alarm system at U. S. Veterans Hospital, Tuskegee, Ala.; plans on file.

Fire Escape.—Wrenn-Columbia Furniture Co., High Point, N. C.—New or Second-hand fire escape for 4-story building.

Flood Gates and Appurtenances.—Farely Lake Levee Dist., Little Rock, Ark.—Bids until July 18 to construct concrete flood gate and appurtenances at Big Bayou Meto, at Gillett, Arkansas; 50,000 cubic yards excavation, 24,000 lin. feet round foundation piles, 20,000 square feet steel pile cut off walls, 6500 cu. yds. concrete, 200 tons reinforcing steel, 150 tons gates and accessories, 1500 ft. of 2-in. and 1,000 ft. of 1½-in. G. I. pipe and fittings, 30 tons hoisting apparatus; plans with Ayers & Miller, Engrs., McCall Bldg., Memphis, Tenn.

Furniture.—Manning Medicine Co., Manning S. C.—To correspond with mfrs. of furniture in N. and S. Carolina and Virginia.

Generator Set.—Standard Electric Machinery Co., (Mchy. Dealers) 7 E. Hill St., Baltimore, Md.—Direct connected A. C. generator set, 25, 30 and 40 KVA., 3 phase, 60 cycle, 220 volt with exciter and switchboard; consider alternate of a belted set.

Generator Set.—Sam'l. T. Williams, (Machinery Dealers) 223 N. Calvert St., Baltimore, Md.—Turbine generator unit, 500 to 1000 K. W., 3 phase, 60 cycle, 220 volts; also condenser.

Gravel.—Warren County Supvr., J. G. Sherard, Clk., Vicksburg, Miss.—Bids until July 5 for 96.1 cu. yds. gravel, f. o. b. Park Spur.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Gravel.—Louisiana Highway Comsn., W. T. Peterman, Chrmn., Baton Rouge, La.—Bids until July 30 to furnish gravel as follows; 12,200 cu. yds. sand-clay gravel containing not less than 50% stone, Oberlin-Alexandria Highway or 4070 cu. yds. washed gravel and 8130 cu. yds. sand-clay gravel, not less than 30% stone; Oberlin-Lake Charles Highway, Section B-2, Oberlin south to Ward Line, 8267 cu. yds. sand-clay gravel, 50% stone or 2754 cu. yds. washed gravel and 5513 cu. yds. sand-clay gravel, 30% stone; J. M. Fourmy, State Highway Engr.; further information on application.

Hardware.—Tobaggon Water Slide, J. Willard Sherman, Mgr., Sulphur Springs Park, Fla.—Prices on small turnbuckles, screws, stove bolts, I bolts.

Heating Plant.—Cherokee County Commsn., A. Rice, Chrmn., Murphy, N. C.—Bids until July 5 to install steam heating plant in county court house; information on application.

Heating Plant.—Swansboro Furniture Co., 2701 Hull St., Richmond, Va.—Heating plant for furniture store; 44x100 ft.

Heating and Ventilating Apparatus.—Board of Awards, Richard Gwinn, City Register, Baltimore, Md.—Bids until July 5 for heating and ventilating apparatus in schools Nos. 11, 81, 83, 94, 110 and 113; plans with J. F. Crowther, Inspector of Buildings.

Hulling (Oats) Machine.—Isham J. Dorsey, Opelika, Ala.—To purchase machine for hulling oats to make oatmeal.

Kitchen Equipment.—Mr. Stoffelbaum, Southwest Baptist College, Bolivar, Mo.—Catalogs and prices on kitchen equipment in connection with \$35,000 dormitory.

Locomotives.—M. B. Parker, Chattanooga, Tenn.—36-in gauge locomotives, second-hand.

Lumber.—Tobaggon Water Slide, J. Willard Sherman, Mgr., Sulphur Springs Park, Fla.—Prices on beech, birch, ash, white oak and hickory.

Machine Shop Equipment.—J. B. Wright, Route 4, Baton Rouge, La.—Prices on 6 to 18-in. lathes, milling machine, shapers and all machine shop equipment.

Metal Tips (Shoe Lace).—C. W. Mayberry, Box 137, Taylorsville, N. C.—To correspond with mfrs. of metal tips for shoe laces.

Miscellaneous Supplies.—Panama Canal, A. L. Flint, Gen. Pur. Officer, Washington, D. C.—Bids until July 6 to furnish: Sheet and tool steel; iron or steel rope; gauge cocks; wire lathe; oars; street brooms; varnish brushes; pneumatic tires; wash tube; water closet tanks; bath tubs; graphite paint; colors; varnish; ship glue; tar rock salt; turpentine and ethyl alcohol. Blank form and information (Circular 1486) on application to Panama Canal: Asst. Pur. Agts., at Fort Mason, San Francisco, Cal.

Miscellaneous Supplies.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids opened July 10 to furnish hardware, kitchenware, tumblers, roofing papers, thermometers, boilers, tin boxes, grinders, meat, bags, paper, stencil, scythes, shovels, tapes, tongs, nails, etc.; delivery to Depot Quartermaster, U. S. M. C., Philadelphia, Pa.; plans on file; Sch. No. 22-1923.

Miscellaneous Supplies.—Manning Medicine Co., Manning, S. C.—To correspond with jobbers of lace curtains, sewing machines, organs and clocks.

Miscellaneous Supplies.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until July 5 to deliver cotton waste, sand and oyster shells to Navy Yard; further information on application.

Miscellaneous Supplies.—Norfolk & Western Ry. Co., J. H. Clemmitt, Pur. Agt., Room

351, N. & W. Ry. Office Bldg., Roanoke, Va.—Bids until July 5 for steel castings; steel bolsters; cast steel side frames; steel shapes, plates and bars; cast steel body bolsters center castings; galvanized fence staples; galvanized brace wire No. 7, etc.; Contract serial Nos. AA-192 to AA-200; further information on application.

Miscellaneous Supplies.—Bureau of Engraving and Printing, Washington, D. C.—Bids until Aug. 5 to furnish mixed black, burnd plate oil and heavy waxed paper for ensuing year; samples not later than July 15; further information on application to Louis A. Hill, Director.

Miscellaneous Supplies.—State Board of Control, Pur. Div., Austin, Tex.—Bids until July 26 to furnish one or all state institutions with three, six and 12 month supplies; beginning Sept. 1, 1922; schedule contains following items: Dry goods, notions, laundry supplies, glass and chinaware, electrical and plumbing supplies, leather and shoe findings, chemicals, drug sundries, coal, fuel and lubricating oils; etc.; further information on application.

Moulders.—Atlantic Coffin & Casket Co., Rose Hill, N. C.—To purchase either P. B. Yates No. 108, or one S. A. Woods No. 107—15x6-in. moulder, to have all latest devices; rebuilt or as good as new; for all practical purposes.

Paints, etc.—Tobaggon Water Slide, J. Willard Sherman, Mgr., Sulphur Springs Park, Fla.—Prices on shellac, water varnish, colors, ground in oil.

Painting.—Board of Awards, Richard Gwinn, City Register, Baltimore, Md.—Bids until July 5 for interior and exterior painting of schools Nos. 8, 9, 13, 21, 30, 31, 50, 70, 95, 116, Brooklyn white, Canton 1 and 5, Curtis Bay, Gardenville, Garrett Heights, Govans and Highlandtown, Pratt and Clinton Sts.; plans with J. F. Crowther, Inspector of Buildings.

Patrol (Motor).—Hinds County Supr., Jackson, Miss.—Bids until July 3 for one motor Hi-Way patrol; W. B. Montgomery, County Engr.

Paving.—City, Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids until July 5, to grade and pave with cement concrete footways in Conts. Nos. 24 and 25; plans, etc., from A. E. Christhill, Highways Engr.

Paving.—City, Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids until July 5, to grade and pave with cement concrete alleys in Conts. Nos. 88 and 89; plans, etc., on file; plans, etc., from A. E. Christhill, Highways Engr.

Paving.—City, Street Improvement District, No. 313, E. M. Keith, Secy., Little Rock, Ark.—Bids opened June 26 to construct paving in Dist.; 12,000 sq. yds. wearing surface on 5-in. base; 5600 lin. ft. concrete curb; 1030 lin. ft. resetting stone curb, etc.; plans, etc., from Ford & McCrea, Engrs., 215 Gazette Bldg.

Paving.—City, J. R. Thomas, Clerk, Clearwater, Fla.—Bids opened June 28 for paving with brick, grading and constructing drainage structures on various streets; 50,400 sq. yds. paving; 44,600 lin. ft. concrete curb and gutter; plans, etc., from J. N. Drew, City Engr.

Paving.—City, W. M. Salisbury, Mayor, Ashland, Ky.—Bids until July 3 to pave following: 8th, 9th, 25th, 44th, 45th Sts., Carter, Bath, Greenup Aves., etc.; alleys, between Winchester and Greenup, 8th to 9th, 9th to 10th; between Winchester and Carter, 7th to 8th, 8th to 9th, etc.; 40,808 sq. yds. paving; 32,643 lin. ft. curb and gutters; brick or bituminous macadam; Ken-

tucky Ave., Central Parkway, Virginia and Cumberland Aves., Ohio St., Maryland Court Circle; bituminous macadam or Kentucky rock asphalt; 12,560 sq. yds. paving; 12,470 lin. ft. curb and gutters; plans, etc., from City Engr., City Bldg.

Paving.—City, V. M. Ake, Secy., Alexandria, La.—Bids until July 3 to construct gravel pavement, with concrete gutters on 13th St. from Jackson to Elliott Sts.; concrete sidewalks with cement curbing on both sides 13th St. from Park Ave. to Elliott Sts.; and concrete sidewalks with cement curbing on Madelaine St., from 19th to 21st Sts.; plans, etc., from City Engr.

Paving.—City, P. A. Poag, Secy., Monroe, La.—Bids until July 1 to pave following: Bright St. from S. Grand to Jackson Sts.; sheet asphalt; 1600 sq. yds. asphaltic concrete; 1200 lin. ft. curb and gutter; Tequaque St. from Grand to Jackson; sheet asphalt; 1600 sq. yds. asphaltic concrete; 1200 lin. ft. curb and gutter; St. John St., from DeSiard to Texas Ave.; sheet asphalt; 3000 sq. yds. sheet asphalt; 7000 sq. yds. asphaltic concrete; 7000 lin. ft. curb and gutter; plans, etc., from R. S. Reynolds, City Engr.

Paving.—City, E. Nicholson, Chrmn., Paying Comsn., Union, S. C.—Bids until July 7 to construct 70,000 sq. yds. pavement; plans etc., from Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

Paving.—City, Earl B. Horner, Mayor, Burlington, N. C.—Bids until June 29 for 13,000 sq. yds. concrete sidewalk with necessary grading; plans, etc., from Ludlow Engr., Winston-Salem, N. C.

Paving.—City, O. F. Holcombe, Mayor, Houston, Tex.—Bids until July 3 for paving following: Travis St., from Portland St. to South End; Wichita St., from Travis St. to South End; both Villa Addition; Villa St. from Main to Louisiana; Milam St. from Villa to Portland Sts.; plans, etc., from City Engr.

Paving.—City, George Keahay, Clerk, Georgetown, Tex.—Bids until June 29 to pave certain streets, 71,211 sq. yds. asphalt top; 71,211 sq. yds. base; 21,904 lin. feet curb; 8200 lin. feet resetting curb; alternate bids on macadam, gravel and concrete base; L. J. Dimmitt, Mayor; W. N. Harris, City Engr.

Paving.—City, Mayor, Jefferson City, Mo.—Bids opened June 23 to pave 2 sections High St.; bituminous macadam.

Paving.—City, H. C. Singleton, Clerk, Camden, S. C.—Bids until July 14 to construct 40,000 sq. yds. pavement; plans, etc., from Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C.

Pier.—City of Sarasota, Fla., E. J. Bacon.—Bids until July 10 to construct municipal pier, solid concrete wall filled in and paved, \$75,000; Leon Pickett, Engr.

Pier Removal, etc.—Dist. Comrs., Room 509 District Bldg., Washington, D. C.—Bids until July 11 to remove old piles and portion of pier, dredging and driving piles at old ferry wharf on Water St., between M and N Sts., S. W.; further information on application to Room 427, District Bldg.

Pipe (Drive).—Memphis Artesian Water Dept., W. H. Harrison, Gen. Supt., 107 N. Second St., Memphis, Tenn.—Bids until July 6 to furnish f. o. b. Memphis, the following: 5400 lin. ft. 12-in. drive pipe with recessed couplings and thread protectors, approx. wgt. 51 lbs. per ft.; 1150 lin. ft. 18-in. outside diam. drive pipe with recessed couplings and thread protectors, approx. wgt. 81 lbs. per ft.; 1500 lin. ft. of 8-in. drive pipe with recessed coupling and protectors, approx. wgt. 30 lbs. per ft.; 1500 lin. ft. 6-in. pipe

June 29, 1922.

MANUFACTURERS RECORD.

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recessed couplings with protectors, 10 lb. per ft.; 25 of 12-in. and 25 of 18-in. screw couplings; further information on applica-
tion.

Pipe, Valves, etc.—Becker's Coal & Build-
ers Supply Co., Surry St., Wilmington, N.
C.—Prices on commission basis on 11,280 ft
of 6-in. and 1600 ft. of 4-in. cast iron pipe;
5450 ft. of 1½-in. galvanized iron pipe; nine
6-in. and one 4-in. gate valves; nineteen
6-in. hydrants and 12 valves; f. o. b. cars
Chadburn, N. C.

Piping System (Steam and Water).—State
Bond Improvement Comsn., Jackson, Miss
Bids until July 3 to furnish and install com-
plete the system of steam and water piping
in power house of the A. & M. College, near
Starkey, Miss.; plans with Link & True
blood, 1520 Chemical Bldg., St. Louis, Mo.;
Theo. C. Link, Supvg. Archt., Box 636, Jack-
son, Miss.

Poles, etc.—Mississippi River Comsn., 1st.

and 2nd Districts, Customhouse, Memphis,

Tenn.—Bids until July 10 to furnish 65,000

cords of brush and poles; further informa-
tion on application.

Printing Press.—Tobaggon Water Slide, J.

Willard Sherman, Mgr., Sulphur Springs Park,

Fla.—Prices on hand job press.

Quarry Equipment.—Randle Machinery
Co., Powers St. and B. & O. R. R., (Cummins-
ville) Cincinnati, O.—Equipment for quarry
and crushing plant, including second-hand
traction wheel type steam shovel with 3-yd.
dipper; prefer to rent for 4 months, with
privilege of purchasing; plant located in
Southern Arkansas.

Rails.—M. B. Parker, Chattanooga, Tenn.
—16 to 20-lb. relaying rails, second-hand.

Rails.—Randle Machinery Co., Powers St.
and B. & O. R. R., (Cumminsville) Cincinnati,
O.—1000 feet of 35 lb. relaying rails.

Road Construction.—Lafayette County, Bd.
of Supvrs., Oxford, Miss.—Bids until July 3
to construct road links Nos. 112 and 123,
in Beat 4; plans, etc., from W. M. Wood-
ward, Chancery Clerk.

Road Construction.—State Highway Dept.,
Montgomery, Ala.—Bids until July 19 for
following:

Cleburne County, 3.48 mi. Heflin-Anniston
road; 6343 cu. yds. chert; plans from Div.
Engr., Birmingham, Ala.

Limestone County, 14,617 mi. between
Athens and bridge over Elk River; 34,292
cu. yds. crushed stone base; 154,356 sq. yds.
bituminous macadam, penetration; alternate
bids for surfacing; 46,000 cu. yds. gravel;
plans, etc., from Div. Engr., Decatur, Ala.

Macon County, 20.48 mi. road from Mont-
gomery County line to Tuskegee; 5000 sq.
yds. mixing sand gravel and clay; plans, etc.,
from Div. Engr., Montgomery, Ala.; W. S.
Keller, State Highway Engr., Montgomery.

Road Construction.—State Road Comsn.,
Charleston, W. Va.—Bids until July 11 for
following projects:

3062—Wyoming County, 4.8 mi. Mullins-
Elmore road; pave 718 ft. with brick, bal-
ance concrete or concrete base with bitu-
minous concrete, Warrenite or rock asphalt
surface, as alternates.

3156—Nicholas County, .5 mi. Main St.

Summerville; bituminous macadam.

3010—Preston County, 10 mi. Kingwood-
Terra Alta road; bituminous macadam.

3135-B—Kanawha County, 2.75 mi. Hughes

Creek to Lock 2; grade and construct drain-
age structures on all.

34 and 60—Monroe County, 4.3 mi. clean
and tar-surfaced.

94 and 2006—Fayette County, 14.1 mi.
clean and tar-surfaced.

1 and 2003—Greenbrier County, 7.9 mi.
clean and tar-surfaced.

2039, 2040, 2042, 2043, 2044—Mercer Coun-

ty, 22.1 mi. clean and tar-surfaced.

72—Hampshire County, 3.3 mi. clean and
tar-surfaced.

62—Hardy County, 7.5 mi. clean and tar-
surfaced.

64—Jefferson County, 3 mi. clean and tar-
surfaced.

67—Berkeley County, 7.3 mi. clean and tar-
surfaced.

1131—Berkeley County, 1 mi. clean and tar-
surfaced.

2093—Mineral County, 2 mi. clean and
tar-surfaced; E. B. Carskadon, Secy.; plans,
etc., on file, or from Div. Engr.

Sewing Machines.—Norton Mattress & Mfg.
Co., H. M. Bandy, Prest., Norton, Va.—
Prices on mchys. for mfrcs. of comforts.

Road Construction.—Cabell County Court,
Thos. Hays, Prest., Huntington, W. Va.—
Bids until July 20 for following:

Barbourville-Salt Rock road, McComas
Dist., south from end of present contract
near Inez.

Main Seven Mile road, Union Dist., from
end of present contract toward Milton.

Long Branch-Wayne road, Barbourville
Dist., from end of present contract toward
Wayne County; grade and construct drainage
structures, and hard surface; plans, etc., from
Joseph N. Doyle, County Road Engr.

Road Construction.—State Highway Com-
mssn., Montgomery, Ala.—Bids until July 19 to
gravel surface 20.50 mi. road from Line
Creek to Tuskegee; grade and construct drainage
structures; Macon County, Federal Aid
Project No. 661; 25,750 cu. yds. topsoil, sand clay or
gravel surfacing; grade and construct drainage
structures; plans, etc., on file or from
District Engr., Charlotte, N. C.

Road Construction.—Warren County, Bd.
of Supvrs., Vicksburg, Miss.—Bids until July
5 to gravel City Cemetery road from County
line to second gate; plans, etc., from Chan-
cery Clerk.

Road Construction.—State Highway Com-
mission, Oklahoma City, Okla.—Bids opened
June 27 for 2 mi. gravel road in Muskogee
County; Federal Aid Project No. 55, 5281
cu. yds. gravel; plans, etc., from Ernest S.
Alderman, State Engr., or County Clerk, B.
E. Clark, Commr. Highways.

Road Oiling Equipment.—Jesse L. Rogers
LaFollette, Tenn.—Road Oiling equipment
for 10 mi. road construction.

Sanitary and Storm Water System.—Board of
Awards, Richard Gwinn, City Register,
Baltimore, Md.—Bids until July 5 to furnish
material and labor for installing sanitary
and storm water system in Venable Stadium,
33rd St.; plans on file; H. G. Perring, Chief
Engr.

School Supplies, etc.—Board of Education,
J. G. Stearley, Clerk, 400 N. Walnut Ave.,
Oklahoma City, Okla.—Bids until July 17
to furnish general school supplies, janitor
supplies, manual training lumber, etc., art,
primary, science and kindergarten supplies
and library books; further information on
application.

Seating.—Rev. N. M. Harrison, Jr., Pastor
West End M. P. Church, Greensboro, N. C.—
Correspondence with mfrs. of church pews
(See Church Furniture.)

Seating.—H. C. Bartholomew, West Palm
Beach, Fla.—Seating for theater. See Thea-
ter Equipment.

Sewer Construction.—City of LaGrange,
Ga., D. A. Leman, Clerk—Bids until July 11
to construct sewers, following quantities:

5000 lin. ft. 10-in., 4000 lin. ft. 8-in., 35,000

lin. ft. 6-in., 2200 lin. ft. 4-in. vitrified sewers;

2600 lin. ft. 10-in., 24 lin. ft. 6-in., 2400 lin.

ft. 4-in. east iron sewers; 900 manholes; 250

automatic flush tanks; 1 duplex sewage

pumping plant. 125 G. P. M.; plans and
specifications on application.

Sewer Construction.—City of Shreveport,
La.—Leon I. Kahn, Commr. of Public Utili-
ties—Bids until July 1 to construct sanitary
sewer line; plans on file at office of Dept.
of Water and Sewerage, City Hall.

Sewer System Material.—City of Mt. Airy
N. C., A. V. West, Mayor.—Correspond with

mfrs. of sewer material.

Stable Construction.—Constructing Quartermaster, Carlisle Barracks, Pa.—Bids until June 27 to construct stables for 104 animals; further information on application.

Steam Traps.—St. Luke's Hospital Assn., Jacksonville, Fla.—Catalogs on steam traps.

Sterilizers.—St. Luke's Hospital Assn., Jacksonville, Fla.—Catalogs on sterilizers.

Tank (Steel).—Pennsylvania Equipment Co., (Mchly. Dealers) Norwood, Pa.—Second-hand closed cylindrical steel tank, 5/16-in or thicker, 10,000 to 15,000 gal. capacity manhole opening, 30 lb. pressure, for underground storage; Canadian delivery.

Tanning Extract.—C. P. McDaniel, Secy. Chamber of Commerce, Newberry, S. C.—To correspond with mfrs. of tanning extract.

Tannery Equipment.—C. P. McDaniel, Secy. Chamber of Commerce, Newberry, S. C.—Data and prices on tanning equipment; correspond with mfrs.

Telephone Supplies.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids opened June 29 for furnishing cords, plugs, coils, keys, combined jack and signals, receivers and parts, generators, protectors and ringers for delivery to Depot Quartermaster, U. S. C. M. Marine Corps, Naval Operating Base, Hampton Roads, Va., marked for Brigade Quartermaster, 2nd Brigade, U. S. M. C., Santa Domingo City, D. R.; plans on file; Sch. No. 435.

Textile Machines.—C. W. Mayberry, Box 137, Taylorsville, N. C.—To correspond with mfrs. of machines for knitting shoe laces.

Theater Equipment.—H. C. Bartholomew, West Palm Beach, Fla.—Theater equipment, seats, etc.

Ventilating System.—H. C. Bartholomew, West Palm Beach, Fla.—Ventilating system for store and theater.

Wall Construction.—Bd. of Awards, Richard Gwinn, City Register, City Hall, Baltimore, Md.—Bids until July 5 to furnish material and labor for construction of reinforced concrete wall on outside of Venable Stadium; 33rd St.; plans on file; H. G. Perring, Chg. Engr.

Water Supply.—U. S. Engr. Office, 250 Old Land Office Bldg., Washington, D. C.—Bids until July 17 to construct Item A, Sec. No. 1; Item B, Sec. No. 2, and Item C of Div. No. 1, Div. No. 2 and Div. No. 3, of water supply conduit system for Dist. of Columbia; further information on application.

Wire (Barbed).—Palm Beach County Comr., Hector Harris, Chrmn., West Palm Beach, Fla.—Bids until July 5 to furnish 180 rolls of four-pointed barbed cattle wire, galvanized, and 300 lbs. galvanized wire fence staples, approx. 45 mi. lin. measure of wire required.

Wire (Carding).—L. L. Foss, Pulaski, Ga.—To purchase carding wire, same as used in factories for carding cotton.

Wire Grilles.—Treasury Dept., Supervising Archt.'s office, Washington, D. C.—Bids until July 5 to furnish wire grilles for U. S. Veterans' Hospital, Augusta, Ga.; plans on file or with Supt. at Hospital.

Woodworking Machinery.—Axford Hicks Jr., Tyler, Tex.—Data and prices on mchly. of mfrs. of furniture.

Woodworking Machinery.—Success Specialty Co., Box 102, Bells, Tenn.—New or good second-hand mchly. to equip woodworking plant.

Woodworking Machinery.—Tobaggo Water Slide, J. Willard Sherman, Mgr., Sulphur Springs Park, Fla.—Prices on woodworking machinery.

MANUFACTURERS RECORD.

Financial News

New Financial Corporations.

Ark., Cotton Plant—Farmers National Bank, capital \$25,000, incptd. with J. W. Hill, Prest.; F. L. Maxwell, Cashier.

Fla., Johnstown—Co-operative Building, Loan & Savings Assn., capital \$1,000,000, incptd. with John P. Coffin, Prest.; Lewis O. Jones, Secy.

Ky., Louisville—Louisville National Bank will establish 2 branch offices.

La., Baton Rouge—Baton Rouge Dairy Cattle Loan Assn., Inc., capital \$25,000, incptd. by W. R. Dodson, C. H. Taples and others.

La., Monroe—Bread Realty & Building Co., Inc., capital \$18,200, incptd. by Dan Armand Bread, Herbert Lee Bread and others.

Md., Baltimore—Hercules Bldg. & Loan Assn., Inc., Park Bank Bldg., capital \$200,000, incptd. by Max Reiser, Grafton T. Maynard and others.

Md., Baltimore—Carey-Baltimore Permanent Building & Loan Assn., Inc., 1302 W. Baltimore St., capital \$520,000, incptd. by Walter M. Weber, Frederick H. Vinip and others.

Md., Baltimore—Ironclad Bldg. & Loan Assn. of Baltimore City, Inc., 723-27 Gaithers Estate Bldg., capital \$500,000, incptd. by E. Reuben Lipman, Josiah S. Hochheimer and others.

Md., Baltimore—Hercules Bldg. & Loan Assn., Inc., Park Bank Bldg., capital \$250,000, incptd. with Max Reiser, Prest., 2339 Linden Ave.; Grafton T. Maynard, V.-P., 410 Park Bank Bldg.

Md., Baltimore—Universal Investment Co., Inc., 508 American Bldg., capital \$25,000, incptd. by E. May Smith, Ruth L. Schimmel and C. Norman Congleton.

Md., Baltimore—Homestead Fire Insurance Co., 6 S. Calvert St., incptd. with Richard Williams, Prest.; Jacob Gross, V.-P. and W. J. Seward, Treas.

Md., Baltimore—Merchants' National Bank, Thomas Hildt, Prest., merged the Second National Bank, Francis T. Homer, Prest.

Miss., Meridian—Meridian Bldg. & Loan Assn., organized with Levi Rothenburg, Prest.; Thos. L. Bailey, Secy.

N. C., Charlotte Building & Investment Co., incptd. by Lee Kinney, L. L. Surratt and Chase Brenizer.

S. C., Anderson—Anderson Bldg. & Loan Assn., organized by Q. Frank Johnson, Ben Thwaite and others. (Lately noted.)

S. C., St. George—First National Bank, \$50,000 capital, conversion of Bank of St. George; R. L. Klauner, Prest.; Cyrus Mims and W. Hermon Pearcey, Vice-Prests. (Lately noted.)

Tenn., Columbia—Maury Abstract Co., capital \$10,000, incptd. with O. L. Atchey, Nashville, Prest.

Va., Axton—Bank, \$50,000 capital is organized with J. M. Barker, Prest.

Tex., Baird—First Guaranty State Bank of Baird, capital \$50,000, conversion of Home National Bank of Baird; E. L. Finley, Prest.

Tex., Laredo—Laredo Bldg. & Loan Assn., capital \$5,000,000, incptd. by R. K. Mims, J. J. Albright and W. L. Guyler.

New Securities.

Ala., Gadsden—Sewer—City will sell \$80,000 bonds. Address The Mayor.

Ala., Mobile—Street—City will issue \$80,000 5% bonds; \$500 denomination. Address The Mayor.

Ala., Rockford—City votes June 27 on \$125,000 6% bonds. Address The Mayor.

Ala., Tuscaloosa—School—City receives bids until July 18 for \$35,000 bonds. Address The Mayor.

Ark., Jonesboro—Paving—City sold \$3,000 bonds to J. Lees, Little Rock. Address The Mayor.

Ark., Parkin—Road—Parkin Road Improvement District, I. R. Dye, Chrmn., receives bids until June 30 for \$225,000 bonds.

Ark., Sheridan—Road—Grant County Commrs. of Road Dist. No. 6, sold \$55,000 6% bonds to M. W. Elkins & Co., Little Rock, at par; mature from 1 to 20 years.

Fla., Arcadia—Road—De Soto County votes July 10 on \$500,000 6% bonds. Address County Comr.

Fla., Miami Beach—Sewer—City, C. W. Tomlinson, Chk., votes July 25 on \$125,000 bonds; \$1000 denomination; dated July 1, 1922. (Lately noted.)

Fla., Fort Pierce—Road—St. Lucie County Comr., sold \$50,000 bonds to Spitzer, Rich & Co., Toledo, for par, accrued interest less \$730 for expenses.

Fla., St. Petersburg—Kindergarten—City, Comr., will call election on \$40,000 bonds.

Fla., Sarasota—Municipal Pier—City, E. J. Bacon, Mayor, votes July 3 on \$75,000 6% bonds. (Lately noted.)

Fla., Tampa—Road—Hillsborough County Comr., voted \$3,000,000 bonds. (Lately noted.)

Fla., Tampa—Harbor—City Comr., receives bids until June 30 for \$600,000 5% bonds; \$1000 denomination.

Fla., West Palm Beach—Fire Protection System, Waterfront Improvement and Building—City Comr., sold \$125,000 bonds to Beisser Investment Co., at \$75,000 premium. (Lately noted.)

Fla., Winter Haven—Street—Town, M. L. Hinderliter, Clerk, receives bids until June 29 for \$150,000 6% bonds.

Ga., Athens—School, Street, Bridge and Sewer—City, Jas. Barrow, Treas., receives bids until July 6 for \$175,000 school, \$50,000 street and bridge and \$30,000 sewer bonds; 5 per cent.

Ga., Madison—Drainage—Sugar Creek Drainage Dist., T. H. Burruss, Jr., Secy., receives bids until July 15 for \$48,000 8% bonds.

Ky., Carrollton—Road—Carroll County, R. L. Hardin, Judge, receives bids until July 1 for \$75,000 bonds.

Ky., London—School—Board of School Trustees, W. A. Wickersham, Chrmn., sold \$21,500 6% bonds to James C. Willison Louisville, for \$22,714.75; \$1000 denomination. (Lately noted.)

Ky., Mt. Sterling—Turnpike—Montgomery County, R. G. Kern and E. W. Senft, Comr., receive bids until July 5 for \$35,000 5% bonds; \$500 denomination.

Ky., Williamstown—Road and Bridge—Grant County Comr., sold \$250,000 5% bonds to Well, Roth & Co., and Provident Savings Bank & Trust Co., Cincinnati, at \$2510 premium.

La., Alexandria—Improvement—City voted \$360,000 bonds. Address The Mayor.

La., Algiers—Building—City voted \$400,

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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MANUFACTURERS RECORD.

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600 bonds. Address The Mayor.

La., Bastrop—School—Morehouse Parish School Board receives bids until July 11 for \$18,000 bonds; \$500 denomination.

La., Rayville—Road—Richland Parish Police Jury, J. C. Salmon, Clk., receives bids until July 11 for \$70,000 6% bonds.

La., Houma—Road—Terrebonne Parish Police Jury, Jean L. Caillouet, Prest., receives bids until July 13 for \$80,000 5% bonds.

La., Jonesville—School—Cutahoula School Dist. No. 5 votes July 6 on \$75,000 6% bonds; \$1000 denomination.

La., New Orleans—Paving—City, R. M. Murphy, Commr. of Public Finances, receives bids until July 17 for \$1,400,000 4 1/2% bonds.

La., St. Martinsville—City votes July 1 on \$130,000 5% bonds. Address The Mayor.

La., Zwolle—Road—Sabine Parish voted July 25 on bonds. Address Parish Police Jury.

Md., Cambridge—Indebtedness—Dorchester County Commrs., John A. Baker, Prest., sold \$200,000 4 1/2% bonds to Nelson, Cook & Co., Baker, Watts & Co., and Townsend Scott & Son, Baltimore. (Lately noted.)

Md., Centerville—Road—Queen Anne's County Commrs., C. Edgar Smith, Clk., sold \$26,000 4 1/2% bonds to Nelson, Cook & Co., Baker, Watts & Co., and Townsend Scott & Son, Baltimore. (Lately noted.)

Md., La Plata—Charles County Commrs. sold \$17,000 5% bonds to Mercantile Trust & Deposit Co., and Stein Bros. & Boyce, Baltimore. (Lately noted.)

Md., Rockville—Road and School—Montgomery County Commrs., Berry E. Clark, Clk., sold \$198,775 4 1/2% bonds to Strother, Brogden & Co., Robert Garrett & Sons, Mackubin, Goodrich & Co., and Continental Co. (Lately noted.)

Miss., Blodgett—School—City votes July 11 on \$8000 bonds. Address The Mayor.

Miss., Crowder—School—City, S. Edward Lester, Clerk, sold \$25,000 bonds to A. K. Tiggert & Co., Memphis, Tenn., at 101. (Lately noted.)

Miss., Fayette—Street and Sidewalk—City, E. H. Reber, Clk., receives bids until July 14 for \$10,000 6% bonds.

Miss., Jackson—Auditorium, School, Water and Sewer—City sold \$150,000 bonds. Address The Mayor. (Lately noted.)

Miss., Magnolia—School—City votes July 7 on \$10,000 bonds. Address The Mayor.

Miss., Natchez—Road—Adams County Commrs. sold \$40,000 5% bonds to Britton & Koontz Bank at 100.001; \$1000 denomination.

Miss., Summit—Street, Water and School City, J. T. Hutchinson, Mayor, sold \$30,000 bonds to Bank of Summit. (Lately noted.)

N. C., Belhaven—Electric—Town, D. S. Smith, Clk., receives bids until July 6 for \$30,000 6% bonds; \$1000 denomination.

N. C., Danbury—Road—Stokes County Commrs. sold \$150,000 5 1/2% bonds to Wachovia Bank & Trust Co., Winston-Salem, and John J. George, Cherryville, N. C., for \$152,000. (Lately noted.)

N. C., Duke—School—City voted \$75,000 bonds. Address The Mayor.

N. C., East Durham—School—City voted \$40,000 bonds. Address The Mayor.

N. C., Edenton—Road and Bridge—Chowan County Commrs., R. W. Boyce, Clk., receives bids until July 3 for \$150,000 bonds; \$1000 denomination.

N. C., Franklin—Improvement—City sold two \$10,000 6% bond issues to W. L. Slayton & Co., Toledo, at \$116 premium each. Ad-

dress The Mayor.

N. C., High Point—School and Street—City, R. L. Pickett, Mgr., receives bids until July 7 for \$250,000 school and \$375,000 street bonds; \$1000 denomination.

N. C., Lumberton—Road and Bridge—Robeson County, M. W. Floyd, Clk., sold \$35,000 5% bonds to Wachovia Bank & Trust Co., at par, accrued interest and \$439 premium. (Lately noted.)

N. C., Madison—Water and Sewer—Town, J. C. Thompson, Clk., sold \$100,000 bonds to Caldwell & Co., Nashville, Tenn., at \$2010 premium. (Lately noted.)

N. C., Mebane—School—Board of Trustees, J. R. Singleton, Secy., receives bids until July 3 for \$75,000 6% bonds; \$1000 denomination.

N. C., Morgantown—Water—Town, O. B. Lackey, Mgr., receives bids until June 27 for \$250,000 bonds. (Lately noted.)

N. C., Raleigh—Road—State, B. R. Lacy, Treas., sold \$9,000,000 bonds to syndicate of New York bankers, represented by Wachovia Trust Co., Winston-Salem and Citizens Bank, Raleigh.

N. C., Wendell—Water—Town, J. T. Allen, Clk., receives bids until July 3 for \$11,500 6% bonds; \$500 denomination.

Okla., Fort Cobb—Road—Town voted \$40,000 bonds. Address The Mayor.

Okla., Madill—Road—Marshall County Commrs., Earl E. Ayers, Clk., voted \$65,000 bonds. (Lately noted to votes.)

Okla., Newkirk—Courthouse—Kay County votes Aug. 1 on \$175,000 bonds. Address County Commrs.

Okla., Rush Springs—Electric—City voted \$5000 bonds. Address The Mayor.

S. C., Camden—Streets—City voted \$200,000 bonds. Address The Mayor.

S. C., Camden—Street—City, H. C. Singleton, Clk., receives bids until July 14 for \$100,000 5% bonds.

S. C., Columbia—School—School District Commrs., W. H. Hand, Secy., sold \$75,000 bonds to Palmetto National Bank for \$77,772. (Lately noted.)

S. C., Lexington—School—City Clerk receives bids until July 6 for \$225,000 bonds.

S. C., Rock Hill—School—Board of School Trustees, R. C. Burts, Secy., receives bids until July 6 for \$150,000 6% bonds.

S. C., Sumter—Road—Sumter County Commrs. receives bids until July 7 for \$500,000 bonds.

Tenn., Clinton—School—Anderson County, J. H. Wallace, Judge, receives bids until July 8 for \$30,000 5% bonds; \$1000 denomination.

Tenn., Manchester—Road—Coffee County voted \$600,000 bonds. Address County Commissioners.

Tenn., Memphis—Revenue—City, C. C. Pasbhy, Clk., sold \$50,000 6% notes to F. S. Mosley & Co., New York.

Tenn., Murfreesboro—Waterworks—City, J. E. Stockard, Recorder, sold \$25,000 bonds to Claude W. Covington, for \$27,500. (Lately noted.)

Tex., Anson—Waterworks—City, J. F. Huie, Secy., sold \$80,000 6% bonds to Breg, Garrett & Co., Dallas, at par, accrued interest and \$2500 premium; \$1000 denomination. (Lately noted.)

Tex., Ballinger—Street and Waterworks—Attorney General, Austin, approved \$50,000 street and \$25,000 waterworks bonds; 6%. Address The Mayor.

Tex., Beaumont—Road—Jefferson County, J. B. Peck, Judge, sold \$2,000,000 bonds to T. N. Chapman, Chicago, at par and accrued interest.

Tex., Brady—School—City votes July 3 on \$40,000 bonds. Address The Mayor.

Tex., Brownfield—Electric—City votes July 21 on \$16,000 bonds. Address The Mayor.

Tex., Brownsville—Road—Attorney General, Austin, approved \$120,000 5 1/2% Cameron County bond issue. Address County Commrs.

Tex., Brownsville—Road—Cameron County Commrs., sold \$350,000 bonds.

Tex., Clarksville—Waterworks, Street and Incinerator—City voted \$22,000 waterworks, \$20,000 street and \$3000 incinerator bonds. Address The Mayor. (Lately noted.)

Tex., Corsicana—Water—City sold \$50,000 5% bonds to Bosworth, Chanute & Co., Denver. Address The Mayor.

Tex., Bryan—Street and School—City votes July 11 on \$30,000 street and \$12,000 school bonds. Address The Mayor.

Tex., Center—School—Independent School Board, J. A. Sanders, Prest., sold \$25,000 bonds; approved by Attorney General, Austin.

Tex., Coleman—Road—Coleman County, L. G. Matthews, Judge, sold \$387,000 bonds. (Lately noted.)

Tex., Conroe—School—Attorney General, Austin, approved \$10,000 6% bonds. Address The Mayor.

Tex., Dallas—School—City will issue \$140,000 bonds; \$1000 denomination. Address The Mayor.

Tex., Decatur—School—Attorney General, Austin, approved \$30,000 6% bond issue. Address The Mayor.

Tex., Dublin—Water—City, J. S. Daley, Mayor, voted \$25,000 bonds. (Lately noted.)

Tex., Groesbeck—School—Attorney General, Austin, approved \$60,000 6% bonds. Address The Mayor.

Tex., Houston—Paving, Sewer, Bridge, Hospital and Library—City, W. A. Moore, Secy., receives bids until July 5 for \$950,000 of \$1,550,000 bond issue; 5%; \$1000 denomination. (Lately noted.)

Tex., Jacksboro—Water and Sewer—City, A. D. Owens, Clk., receives bids until June 29 for \$70,000 5 1/2% sewer and \$5000 6% water bonds.

Tex., Joaquin—Road—City voted \$75,000 bonds. Address The Mayor.

Tex., Johnson City—Road—Attorney General, Austin, approved \$25,000 5 1/2% bonds of Blanco County Road Dist. No. 1. Address County Commrs.

Tex., Lubbock—School—Attorney General, Austin, approved \$150,000 5 1/4% bonds issue. Address The Mayor.

Tex., Liberty—Road—Liberty County, Sam Cain, Judge, sold \$1,300,000 bonds to J. E. Jarett, San Antonio.

Tex., Lometa—Waterworks and Sewer—Attorney General, Austin, approved \$65,000 water and \$35,000 sewer bonds. Address The Mayor.

Tex., Marathon—School—Attorney General, Austin, approved \$20,000 bond issue. Address The Mayor.

Tex., Marlin—Marlin—Road—Falls County Commrs. sold \$100,000 5 1/2% bonds to Bosworth, Chanute & Co., Denver.

Tex., McLean—Waterworks, Power Plant and Street—City votes July 18 on \$74,000 bonds. Address The Mayor.

Tex., Moran—Water—Attorney General, Austin, approved \$35,000 bond issue. Address The Mayor.

Tex., Muleshoe—Road—Bailey County Commrs. receive bids until July 15 for \$30,000 bonds.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Plane—Sewer—Attorney General, Austin, approved \$40,000 bond issue. Address The Mayor.

Tex., Port Arthur—School—City votes July 1 on \$675,000 bonds. Address The Mayor.

Tex., Robert Lee—Road—Attorney General, Austin, approved \$60,000 5½% Coke County bonds. Address County Comms.

Tex., Sanderson—Road—Terrell County, G. J. Henshaw, Judge, receives bids until July 1 for \$250,000 5½% bonds; \$1000 denomination.

Tex., Uvalde—Road—Attorney General, Austin, approved \$236,000 6½% Uvalde County bond issue. Address County Comms.

Tex., Winters—Water—City will vote on \$30,000 bonds. Address The Mayor.

Tex., Ysleta—School—City will vote on \$50,000 bonds. Address The Mayor.

Va., Danville—Electric—City, Richard L. Moss, Auditor, sold \$100,000 5% bonds to Frederick Nolting & Co., Richmond, for \$101,543 and accrued interest; \$1000 denomination. (Lately noted.)

Va., East Radford—Water and Electric—City, Paul J. B. Murphy, Mgr., voted \$225,000 bonds.

Va., Portsmouth—Road and Bridge—Norfolk County Board of Supervs., G. Taylor Gwathmey, Clk., receives bids until July 18 for \$110,000 bonds.

W. Va., Parkersburg—School—City votes Aug. 3 on \$650,000 bonds. Address The Mayor. (Lately noted.)

W. Va., Wheeling—Waterworks—City, Walter M. Evans, Clerk, sold \$2,000,000 5% bonds to Stacy & Braun, New York, at \$113,000 premium. (Lately noted.)

Financial Notes.

Ky., Louisville—Louisville Trust Co., A. Glenn Smith, V.-P. and Secy., was admitted to Federal Reserve System.

Tenn., Knoxville—Fidelity Trust Co. contemplates increasing capital from \$500,000 to \$1,000,000.

Tex., Waco—Dilworth Title Guaranty Co. changed name to Central Texas Title Guaranty Co., and increased capital from \$1000 to \$100,000.

Va., Ashland—Water and Sewer—Town, J. A. Hoofnagle, Treas., sold \$70,000 6% bonds to First National Bank, at 106.85; \$1000 denomination; dated July 1, 1922; mature July 1, 1957. (Lately noted.)

W. Va., Wheeling—Mutual Savings Trust Co., increased capital from \$200,000 to \$250,000.

Trade Literature

Velocity Stage Steam Turbines.

A line of velocity stage turbines especially designed for high pressure and high temperature steam are described, with pictures, in a catalog of 28 pages issued by the De-Laval Steam Turbine Co., Trenton, N. J. The cast steel steam chest is located in the casing cover so as to avoid conducting heat to the bearings. In addition to the speed governor and the governor valve, there is an independent valve controlled by an automatic overspeed trip. These turbines are built in sizes up to 1200 horsepower and are designed to be directly coupled to high speed centrifugal pumps and blowers, small alternating current and direct current generators, and by means of double helical speed reducing gears to large pumps and blowers, medium size generators, belt pulleys, rope sheaves and slow and moderate speed machinery.

Portable Air Compressors.

Bulletin 22-A of the Domestic Engine & Pump Co., Shippensburg, Pa., describes their new line of portable gasoline driven air compressors which are also fully illustrated. There are, furthermore, cross section diagrams displaying the interior construction of these machines and the descriptive material gives full particulars concerning them.

Small Steam-Operated Turbines.

Bulletin No. 1123 of the Allis-Chalmers Manufacturing Co., Milwaukee, Wis., is named "Small Steam Turbines." These turbines are suitable for driving condenser auxiliaries, exciters, small generators, etc. The bulletin gives full particulars concerning them with pictures, some of which show cross sections of the machines, the many advantages of which will thus be understood and appreciated.

Cast Iron Products.

The United States Cast Iron Pipe & Foundry Co., Burlington, N. J., with works also at Aniston, Bessemer and Birmingham, Ala.; Chattanooga, Tenn.; Louisville, Ky., and several other points, have issued a booklet entitled "Usicast Products," which contains many interesting and instructive pictures giving reproductions of views at some of the plants and others of products of the company. These illustrations are finely done.

Road Paving Machinery.

Finely and completely illustrated, Catalog 409-D of the T. L. Smith Co., Milwaukee, Wis., has as its central picture a two-page illustration of the 21-E Smith paver, full caterpillar traction, with boom and bucket. This is a superior publication, containing many views of Smith road building machinery in operation, besides sundry other half tones showing either complete machines or important details of their construction. A table giving the specifications of the different sizes of pavers will be found useful and valuable.

Facts About Water Tube Boilers.

The Henry Vogt Machine Co., Inc., Louisville, Ky., have issued Bulletin W-T2 presenting full information and tabulated data relative to their water tube boilers. It also outlines the factors which should be given consideration when water tube boilers are purchased and furthermore explains briefly the principles of design, the details of construction and other features of the Vogt product. The illustrations that accompany the reading matter are numerous and of a superior character and the entire bulletin has been prepared in a practical yet artistic manner.

Safe Electric Switches.

Type QC-3 quick break lever switches up to 600 volts and 1000 amperes are illustrated and described in Bulletin No. 47,326 issued by the General Electric Co. They are made in either single, double, triple or four pole combinations for single or double throw. Switches with N.E.C. fuse connections are in capacities from 60 to 600 amperes; switches without such connections are made in capacities from 60 to 1000 amperes. At normal rating, it is stated, no part of any of these switches will exceed the heating limits specified in the standardization rules of the American Institute of Electrical Engineers, provided the connections to the switches do not exceed these limits, and provided the switches are kept in proper adjustment with contacts clean. They have been approved by the National Board of Fire Underwriters.

Distribution Transformers—Small Generators.

The Allis-Chalmers Manufacturing Co., Milwaukee, Wis., have issued Bulletin 1109 covering distribution transformers having ratings of 200 K. V. A. and smaller, suitable 1099-B is also issued by this company, being a revised bulletin concerning their line of small alternating current generators for belt drive and also for direct coupling. Both of these publications contain abundant information relating to their respective subjects and the pictures are fine and accurate.

Vises and Other Products.

Catalog 35 of the Athol Machine & Foundry Co., Athol, Mass., relates to the Athol-Stearrett vises, hardware specialties and machinery. Besides a number of different types of vises for various uses, the catalog treats of animal tethers, bench grinder counter-shafts, bench grinders, household grinding stones, grindingstone frames, adjustable grinding stone truers, repair parts, etc. The book is finely illustrated with tables giving full information as to general dimensions, capacities, etc.

Boiler Feed Water Regulation.

"Regulating Boiler Feed Water" is the title of a booklet just published by the Northern Equipment Co., Erie, Pa. The subject has been treated in an entirely new way, the object being to cover it completely and yet briefly. To do this free use has been made of the graphic method of presentation, charts showing the effect of feed water regulation on water input, steam output, feed water temperature, etc. Other charts, reproductions of photographs, etc., are likewise employed. There are only 20 pages in the booklet which can be read in a very little time.

To Prevent Boiler Tube Corrosion.

National Bulletin No. 4C of the National Tube Co., Pittsburgh, Pa., deals with prevention of corrosion of boiler tubes in either locomotive, stationary or marine engines. Three authoritative articles have been selected and incorporated as the basis of this publication in order to completely encompass the entire scope of corrosion in its relation to boiler tube service and the information thus combined gives the more important data on the problems involved. Taken individually each article reflects the principal accomplishments of research in the respective fields of locomotive, stationary and marine engine boiler practice. The bulletin is finely printed on heavy paper and is appropriately illustrated.

Pig Iron for Castings.

The Bethlehem Steel Company has issued a booklet of 28 pages telling of the advantages of Mayari pig iron for making better castings. The ore from which this iron is made comes from the Mayari Mountain in the Province of Oriente on the northeast coast of Cuba. The ore deposit, which resembles clay in its natural state, is from 12 to 30 feet deep and covers the top of the mountain to an extent of about 25,000 acres. It contains, with the iron, nickel and chromium and, in small quantities, titanium and vanadium. Before being put in a blast furnace the ore is dried and nodularized at the company's kilns at Felton, Cu. a. and is then shipped to the Sparrows Point plant of the company near Baltimore, Md. It is said that pig iron made from this ore gives castings of increased strength and solidity and it has a long life. Full particulars, with pictures, are given in the booklet.

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Gasoline and Steam Road Rollers.
Road rollers of both gasoline motor and steam engine types built by the Galion Iron Works & Manufacturing Co., Galion, O., are pictured and described in a handsome catalog issued by them, the artistic cover on the publication being most attractive. The illustrations are of a high degree of excellence and the descriptive material is ample but not wordy. Specifications are also given. The pictures showing these road rollers at work will be appreciated by contractors and others interested in road building.

Slate for Electrical Uses.

The Structural Slate Co., Pen Argyl, Pa., have received from their printer "Chapter 12" of a series of publications entitled "Slate for Electrical Uses." This latest addition to the series contains the results of exhaustive researches and tests made by Lehigh University in order to establish accurate, scientific data and other information regarding the physical, chemical and electrical characteristics of slate. It was prepared by the Structural Service Bureau, 112 S. 16th St., Philadelphia, in co-operation with the producers.

Compressed Air Tools and Machinery.

The Sullivan Machinery Co., 122 South Michigan Ave., Chicago, Ill., have issued several new bulletins relative to products of their make as follows: 70-X, a compressed air spader or pneumatic clay digging tool; 77-D, portable air compressors of three different types; 79-C, Ironclad coal cutters for room and pillar and longwall mining; 79-D, coal cutters, Class CE-7 for room and pillar mines; 79-E, longwall Ironclads; 79-F, motors, driving gear, cutters and feed for coal cutters. All of these bulletins are clearly printed and finely illustrated, and are punched for binding.

Excavating Machines.

Bulletin 57-X of the Pawling & Harmschfege Co., Milwaukee, Wis., describes and illustrates in its thirty-six pages, the P. & H. gas driven "8 in 1" excavators of various sizes and types, including full circle swing gas shovels, draglines, grab bucket cranes, material handling cranes, and other rigs to be used with these machines, such as the Skimmer scoop, and pile driving rig, besides accessories like the backfilling scraper bucket, hook and sling chains, and electro magnet. This bulletin succeeds No. 56-X with additional information on the 208 and 210 excavators. These larger machines are also mounted on the corduroy traction of this make.

Steel Sash for All Windows.

General Catalog No. 11 of David Lupton's Sons Co., Alleghany Ave., and Agate St., Philadelphia, is a large and fine publication of nearly 200 pages concerning which the statement is made that it is believed this catalog will convey a new conception of the opportunities offered by solid steel sash not only for business buildings, industrial plants, etc., but for schools, hotels, residences and many other structures. Among the new types are residence and apartment windows, casements and double hung windows for fine dwellings, hotels, etc. The company has endeavored to make this catalog a complete handbook on the most approved practice in the use of steel sash. A catalog of casements and double hung windows, issued by the same firm, is equally comprehensive in its particular line. The illustrations in these books are executed in the finest and most accurate manner.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Book Reviews.

America and the Balance Sheet of Europe. By John F. Bass and Harold G. Moulton, New York: The Ronald Press Company, 1921. \$3.

This book is a first-hand study of an intensive nature as to European conditions, the authors having just returned from abroad when they undertook the preparation of the work. It looks far ahead and in a strong, impressive manner explains the economic state of affairs in Europe and its effect upon the United States. All this is done in simple, direct style that is clear and graphic so that the reader cannot fail to comprehend the message conveyed no matter whether he does or does not agree with it. But it is much to be doubted whether they will find among American business men many adherents to the view given in this quotation from the book: "Protection may be all right in theory, but it will not work in practice as the last two years have conclusively demonstrated. Economically speaking, the world needs more than anything else the resumption of specialized production in accordance with the varying capacities of nations and the unrestricted exchange of commodities between countries." Again we do not urge that absolute free trade between nations should immediately be established. But we do insist that the erecting of additional tariff barriers and trade restrictions at this time would result disastrously to the industries of all countries and that gradual reductions of duties everywhere would be enormously beneficial." The authors also declare that "One of the outstanding tasks of the world today is to redistribute the world's gold supply in such a way as to make possible the restoration of the gold standard in all of the leading nations." They furthermore approve of an

association of nations for economic advantage to all, but not of the existing League of Nations "especially since it is irrevocably tied to war settlements." The volume is full of vigorous ideas and readers will be repaid for the time which they devote to its perusal.

Effective Direct Advertising. By Robert E. Ramsay. D. Appleton & Co., New York and London, 1921. \$5.

This is a comprehensive work and as such will appeal to practical men and women having to do advertising. Its sub-title aptly describes its contents in these words: "The principles and practice of producing direct advertising for distribution by mail or otherwise." Explanation is made of every phase of direct advertising which is analyzed fully but in simple terms. The book will be welcomed and useful to anyone whether they desire to advertise by means of individual sales letters or by a profusion of broadsides. Moreover, it is suited to the advertising requirements of everyone big and little, wholesale and retail. A demonstration is made of how to prepare all forms of circular material, including details, such as selecting type and paper, printing and folding. The reader is also told how to secure mailing lists, how to maintain them in an orderly way and how to keep record of returns. Advertising campaigns are described and advice is given as to how to prepare advertising "copy." The counsel which the author gives his audience is sound and honest and makes for the best advertising, the kind which gives honest and stable results. The volume which has more than 600 pages is well printed and well bound and contains in addition to the reading matter, numerous illustrations and examples of advertising.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Advisory Engineer Engaged.

The United Machine & Manufacturing Co., Canton, O., have engaged Joseph Harrington, a well-known combustion expert, as advisory engineer. The company controls and manufactures the Harrington traveling grate stoker, the Industrial under-feed stoker and Mosher separators.

Removal of Departments.

The American Bridge Company will on June 24 locate its vice president's department, the chief engineer's department, the eastern division contracting department and the treasury department in the Empire Building, 71 Broadway, New York. For the present the eastern division engineering department, the traffic department, and the eastern division sub-contract departments will continue at the Hudson-Terminal Building, 30 Church St., New York.

Incorporation Announcement.

Announcement is made that the firm of Ulen & Company has been incorporated to continue under the same management the business conducted for 22 years by the Ulen Contracting Corporation and consisting of planning, financing and constructing railroads, tunnels, waterworks, sewerage systems, port developments and similar public works in any part of the world. President, Henry C. Ulen; Vice-Presidents, L. E. Bennett, C. M. Bounell, M. D. Carrel, Thomas S. Shepperd;

Secretary, Earl C. Ulen; Treasurer, Thomas F. Devaney; Assistant Secretary and Treasurer, H. W. C. Fosdick. The announcement is made over the names of the American International Corporation, the Ulen Contracting Corporation and Stone & Webster, Inc., 120 Broadway, New York.

Rebuilt and Again in Operation.

The Light Railway Equipment Co., with general offices in the Commercial Trust Building, Philadelphia, Pa., have organized and rebuilt with new machinery since the recent fire at their works near Philadelphia and are operating to nearly full capacity. The entire corporate stock, it is stated, is now controlled by H. A. Ellis, president, treasurer and general manager. The other officers are I. F. Balsley, vice-president; E. L. Ellis, secretary. The company manufacturers frogs, switches and light steel cars for industrial railroads.

New Small Surface Condenser.

A small Ingersoll-Rand surface condenser recently shipped to the Diamond Match Company's plant at Springfield, Mass., will serve a 600 K.W. turbine. It is constructed with a separate cooler mounted on the shell, a characteristic of this make of surface condensers. In this cooler the air and vapors are thoroughly devapORIZED before being finally drawn off by the vacuum pump equipment. Air is withdrawn by a steam jet vac-

uum pump in combination with a small secondary reciprocating pump. The primary pump. The primary steam jet is mounted on the cooler dome and the secondary jet on a tee. The secondary vacuum pump takes its suction from the open end of the tee. The condensate and circulating water pumps are Cameron centrifugals, also supplied by the Ingersoll-Rand Co., 11 Broadway, New York.

Improved Hacksaw Frame.

A new pistol grip hacksaw frame known as No. 160 has been brought out by the L. S. Starrett Co., Athol, Mass., and it contains several interesting features. Constant spring tension is maintained on the bolts holding the blade and this, in connection with the positive adjustment on the back, makes the changing of blades simple and rapid. The pawl for adjustment is down inside of the frame as low as possible giving the frame a good appearance. The back is of steel tubing, so that it will not buckle and all steel parts are nickel plated. The blade can be set to cut in any direction by turning the wing nut, which does not have to be re-

moved for the purpose. The frame is deep —3% inches from the cutting edge of the blade; blades from 8 to 12 inches long can be used. The comfortable handle is of hard rubber, checked.

Offices Removed—Increased Activity

The Northwest Engineering Co., Green Bay, Wis., manufacturers of crawler cranes and draglines, have announced the removal of their general sales offices to 1220 Steger Building, Chicago, Ill. W. W. Mutter, vice president, is in active charge of the offices. It is also significant to note that activity in the fields reached by this company's organization has so increased that it has become necessary to operate the Green Bay plant at night as well as in day to supply the demand for the company's products.

Improvements to Creosoting Plant.

Recently completed improvements, and others in course of completion, by the Pensacola Creosoting Company, Inc., Pensacola, Fla., embrace the erection of two 150,000 gallon storage tanks which, in addition to the existing tank capacity, now gives the company a total storage capacity of 450,000

gallons of imported distillate and domestic creosote oils. Besides, there is the erection of a new combination planing, wood block and cross arm mill, equipped with the most modern machinery and with a combined average output of 50,000 feet of lumber, paving blocks and cross arms daily. The track facilities throughout the plant which connect with all railroads entering Pensacola, have undergone a thorough change in order to facilitate the handling of heavy material by locomotive cranes. There is storage space for approximately 2,000,000 feet of lumber, 5000 poles and piling and 50,000 cross ties, stocks of which are carried. The organization is composed of experienced creosotes especially the executive force, and there is a finely equipped laboratory for oil analysis and other research work. There are two treating retorts, 6 by 85 feet and 6 by 100 feet respectively, with a daily treating capacity of approximately six car loads of material. This company, which was until recently known as Southern Paving Construction Co., is situated in the heart of the lumber manufacturing region of the western part of Florida and in a city where it is possible to ship by either rail or water.

Contract Let for \$300,000 Gymnasium.

Charlottesville, Va., June 26—[Special.]—The King Lumber Co., of this city, have been awarded the contract for erection of a gymnasium to cost \$300,000 at the University of Virginia. The building is 100 by 318 feet, three stories high, of steel and reinforced concrete, brick and stone. It will contain swimming pools, running tracks, etc.

Its Government Account Closed.

The Interstate Commerce Commission has authorized the payment of \$231,000 to the New Orleans Great Northern Railroad. This, it is stated, will close the account which arose between the railroad and the Government as a result of the guarantee given to the carriers against losses in operation during six months of 1920. It will, it is further remarked, make the total payment of the Government to the road \$336,555.

Opinions as to a Southeastern Railway Merger.

Last week during the hearing on the tentative plan of the Interstate Commerce Commission for the consolidation of the railroads in the southeastern part of the country into a smaller number of systems it was further developed that a merger of the Louisville & Nashville Railroad, the Atlantic Coast Line Railroad, and the Nashville, Chattanooga & St. Louis Railway would probably be approved by the interests controlling those lines. President W. L. Mapother, of the Louisville & Nashville Railroad, testified that he thought such a system ought to include the Carolina, Clinchfield & Ohio Railway, the division of the Norfolk & Western Railway, and the Charleston & Western Carolina Railway already operated in connection with the Atlantic Coast Line. He also suggested that the Atlanta, Birmingham & Atlantic, Railway might also be of use to his line and also to the Atlantic Coast Line in rounding out their facilities to and from Jacksonville, Fla. George B. Elliott, general counsel of the Atlantic Coast Line, gave similar expressions of approval. The Atlantic Coast Line, it will be remembered, controls the Louisville & Nashville through stock ownership.

G. R. Loyall, president of the Norfolk Southern Railroad, was opposed to any plan looking to the consolidation of that road with any other line or lines, as it is in competition with any lines with which it could be merged because of their proximity.

Conditions at Southern Pine Mills.

New Orleans, La., June 24—[Special.]—Lumber sales for the week of June 16 as reported by 132 mills of the Southern Pine Association amounted to 3968 cars of \$3,824,000 feet, giving an average order per mill of 635,030 feet. Shipments for the week totaled 3801 cars containing \$0,296,125 feet, or an average of 698,304 feet per mill. Production was 78,869,224 feet, the average per mill being 597,494 feet.

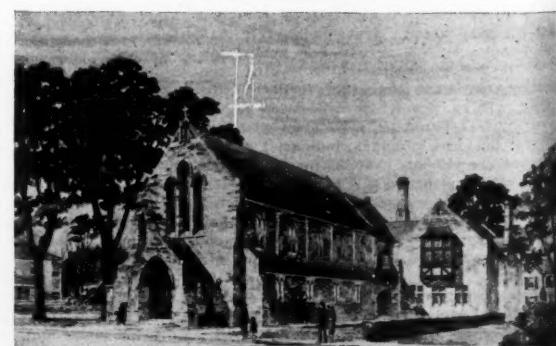
Contrasted with the report of activities during the preceding week, orders and production both increased, while shipments declined. The average unfilled orders per mill increased to 2,519,796 feet, there being a total of 15,745 unfilled cars. The increase in "orders on hand" during the week was 1.07 per cent.

Shipments were 1.81 per cent above production. Orders were 6.28 per cent above production and 4.39 per cent above shipments.

The summary report for the week is as follows:

	Cars	Feet
Orders on hand beginning of week.....	15,578	329,085,29
Orders received during week.....	3,968	83,824,00
Total.....	19,546	412,909,29
Shipments during week.....	3,801	80,296,125
Orders on hand end of week.....	15,745	332,613,125

CHRIST EPISCOPAL CHURCH, SPRINGFIELD, MO.



Attractive structure to be erected at Springfield, Mo., for Christ Episcopal Church; early English Gothic type; native limestone construction; cut stone trim; slate roof; auditorium to seat 300 Hoener, Baum & Froese, Archts., St. Louis.

Orange, Tex., as a Seaport, an Industrial City and a Center of Oil Development.

With alert, forceful leadership, organized effort is inaugurated to secure widest recognition of advantages thirty foot waterway gives to Orange—Development of rich resources sought, with fullest utilization of opportunities for commercial and industrial expansion—Oil activities under way expected to develop enormously productive field.

By ALBERT PHENIS

With an assured depth of 30 feet in the Sabine-Neches waterway from the port to the sea, a distance of 39 miles, Orange reaches a goal for which long and strenuous effort has been put forth by her energetic citizens.

Facilities thus provided will enable the larger ocean-going vessels to fully load at the Orange docks. The opportunity thus created for expansion in volume and variety of shipping, for the creation of new industries and for the upbuilding of a greater Orange in numerous lines of commerce and industry is keenly realized by the forces directing the activities here, and there is an alert and determined purpose to take immediate advantage of the favorable conditions that have been created.

Behind this determination are powerful individual forces, united in a highly vitalized organization, the Orange Chamber of Commerce; and backed by as wide-awake a municipal body—the Mayor, City Council and Wharf and Dock commission—as are to be found anywhere. The leaders in Orange today are young, forceful men, men whose conspicuous ability would be noteworthy in any community; and with personnel and an already well established impetus in the town, it seems a foregone conclusion that Orange will be a great city.

It is the purpose of Orange to vigorously push its advantages; to seek the establishment of every kind of factory which can be advantageously located at a deep water Southern port; to further the live stock and agricultural interests of the tributary country and to build up export trade by the interchange of American products with the raw materials and the manufactured products of foreign lands.

With favorable congressional action already secured, there will be a 30 foot channel to the sea within two year's time, instead of the present 25 foot depth, and the waterway will

be materially widened and made straighter at the same time.

This means the bringing of ocean-going tankers to Orange for cargoes, a necessity that would follow the development of the Orange oil field, now under way; it means a chance for the establishment of oil refineries here, an industry that has within a few years brought Port Arthur from a salt marsh to a city of 30,000 or so and Beaumont from a village to a compact, well-built city of over 40,000; it gives advantages to Orange for attracting woodworking industries, to utilize the hard woods of the district and also the mahogany and other woods of the Central American countries; it provides an increased inducement for the establishment of glass

factories here, to utilize the excellent silica sand found all about, even in the bed of the Sabine river; it means opportunities for an expansion of the already important rice milling industry; for cattle raising and shipping in large volume; for the greater distribution of Orange's famed Calcasieu timber, the product of the long-established Lutcher & Moore Company, and it means a widening and a broadening of industrial opportunity.



THE LUTCHER MEMORIAL PRESBYTERIAN CHURCH.

ties in a great variety of lines, and the creation here of entirely new industries and trade conditions as well.

Orange believes that its location, its port, its rich contiguous territory, its climatic and physical attractions, together with the fact that it is a long-established and wholly stabilized community, provide all the elements required for a development of important proportions.

If a great oil field is developed here—and many believe that the Orange field will become one of the very greatest the country has known—the expansion would come with rapidity and in great volume, as has been experienced by every city around which an oil boom has flourished. For oil means wealth, vast quantities and in rapid flow, and this



FRANCES ANN LUTCHER HOSPITAL



ORANGE HIGH SCHOOL



WARD SCHOOL

June 29, 1922.
Descriptive Advertisement



ORANGE COUNTY COURT HOUSE.

wealth always finally lands in the hands where it belongs—the hands of those who conserve it and put it to good use. Witness the industrial developments, the sky-scrappers, the schools, the churches, the good roads, the conveniences and the civilizing influences of all kinds that have followed in the wake of the oil developer in every Texas city and town where oil has played a part.

So Orange hopes and expects an oil development here, and a big one at that. But it has other strings to its bow, and believes that men, men with vim, vigor and vision, are the prime essentials in the upbuilding of a city, and that the fate of Orange at the last depends upon the use that is made of whatever opportunities may be immediately at hand. And so Orange is planning her faith in a permanent, enduring future for this port, on a well rounded development, to be brought about by the energy and determination of her citizens.

Orange enterprise has already been conspicuously demonstrated in the deep water and harbor facilities, in the city and county program for concrete streets and good roads now under way, and in a notably fine system of public schools, built and to be built.

The Sabine river, which for over two hundred miles marks the boundary line between Louisiana and Texas, is conspicuous, for its great volume of water, among the rivers west of the Mississippi. It empties into Sabine Lake a few miles below Orange. While the river at Orange is of ample depth—35 feet, or so—there were shoals at the bar, and shipments, then largely of lumber, rice coming later, had to be lightered to ships in the gulf outside the passes. In the early 80's, H. J. Lutcher, W. H. Stark and Dr. E. W. Brown began the agitation for improvement of the waterway to the gulf. The first work done by the Government was to build jetties at the mouth of the Sabine, giving for the first time a depth sufficient for vessels of over six feet draft to cross the bar. When in the early 90's Arthur Stilwell

built the Kansas City Southern Railway and founded the city of Port Arthur, he dug a ship canal of nine feet depth alongside the shallow Sabine Lake from the Neches to the passes.

The Government finally took over the Port Arthur ship canal, which it widened to 90 feet, and deepened to 25 feet, by successive steps, with the aid of local contributions by the navigation districts of Beaumont and Orange, on a dollar for dollar basis—a now popular co-operative plan, which originated here, it is said.

With the big development of the Midcontinent and coastal oil fields, oil refineries, now among the biggest in the world, were located at Port Arthur and Beaumont.

These cities appealed to the Government for a 30 foot depth and a width of 125 feet, to properly and economically handle the new commerce, and attention was called to the fact that the total tonnage of inbound and outbound shipments in the Orange-Beaumont-Port Arthur (or Sabine) district amounted for 1920 to 11,846,159 tons, according to the figures given in reports of Government engineers, and pointed out that no other American port outside of New York had published figures showing a greater tonnage during that year.

A bill to give the desired relief, except as to the Sabine river and Port of Orange, having been agreed on by the House Committee on Rivers and Harbors, a delegation headed by Mayor W. E. Lea, representing the city and the Orange Navigation district, made two trips to Washington to urge the inclusion of Orange in the deep water project. So vigorously and convincingly was the cause presented by Mayor Lea that Orange was finally included, and will receive the full benefit of the new work to be undertaken.

As heretofore the Orange Navigation district pledged itself to pay half the cost of the improvement, "whatever is required". The government estimate of the total cost is \$350,000, so that Orange's part will be \$175,000 for the full 30 foot project as outlined.

In securing favorable action by Congress in behalf of the improvements for the entire Sabine district, no little credit is given Maj. T. M. Adams, U. S. engineer in charge of the (the Galveston) district, who has strongly favored the deep water project, holding that it is a measure to which the district is entitled by right of the important commerce already created, and the greater commerce which the improvements will bring.

Port facilities created here previous to 1918, at an expenditure of \$325,000 for sheds and wharves, consist of a slip 3000 feet long by 200 feet wide, with a warehouse 200 by 90 feet and a loading apron 800 feet long. Here ships discharge cargoes and take on lumber, oil, rice and merchandise for all parts of the world.

Artesian water of remarkable purity is one of the valued assets of Orange, and here at the dock is an artesian well flowing 200 gallons a minute, for the use of all ships tying up. In view of the fact that Port Arthur ships its water



SPANISH TRAIL AND BRIDGE.



ORANGE CITY STREET.



WORLD'S LONGEST PLANK ROAD.



THREE RESIDENCES TYPICAL OF THE FINER HOMES IN ORANGE.

supply from Orange, the free and abundant water supply is an appreciated facility of the port of Orange. It is also an advantage that there is fresh water practically all the time in the river at the city slip. Freedom from salt water and also from floating oil is a feature highly prized.

A bond issue of \$250,000 is available for new harbor improvements, and the work will be undertaken at an early day. The additions and improvements include the extension of the apron 700 feet, giving 1500 feet in all; a new warehouse 400 by 90 feet and a lumber shed 400 by 90 feet; an open platform 100 by 90 feet and the installation of modern equipment, including electric hoists, etc. The improvement will be erected on a foundation of concrete sheathed creosoted piling and the buildings will be of practically fire-proof construction.

There are several smaller wharves for the accommodation of smaller vessels. At the turning basin there are approximately 2000 feet of combination railroad and wharf frontage.

All the docks and wharves are served by a municipally owned railroad, connecting with the railroads entering Orange, the Southern Pacific and the Gulf Coast Lines.

Orange is the western terminus of the Sabine-Calcasieu intercoastal canal, which is an important feeder of commerce to this port, in the way of rice, cattle and lumber. Lake Charles, La. has recently voted a \$2,750,000 bond issue to give a 30 foot depth to this canal from Lake Charles to the Sabine, opposite Orange.

While there are but two lines of railroad serving Orange, there will be no difficulty in securing an extension of the Missouri Pacific, which is but 40 miles away, and the Cotton Belt, which is within 35 miles of a direct connection with Orange, and which is now without a seaport. With the expansion of commerce here sufficiently great to attract these lines it is not doubted that one or both of them will be extended. There are also a number of tram roads in operation in the timber regions, which could be later connected up to give another line to the Mississippi river.

A terminal and belt line plan has been proposed which will relieve prospective new lines of the problem of terminal facilities, and no difficulty is therefore apprehended as to securing additional roads when the commerce of the port has need for them. As all Gulf coast ports are on a parity as to railroad rates, the roads will be free to go wherever commerce beckons.

Chief among the present industries of Orange is that of the Lutcher & Moore Lumber Company, with a present capacity of 400,000 feet a day in the two mills at Orange and of 50,000 feet at the smaller mill at Lunita, La. Great sheds and wharves have been constructed for the important export business which the company has built up, and at times as many as half a dozen transoceanic and coastwise steamships, schooners and barges may be loading at the company's wharves. There is a large trade with Central and South

America, Cuba and the West Indies, and it is declared that the "Lutcher-Orange" trademark has for years been a familiar sight on the docks of Liverpool, Southampton, Rotterdam, Amsterdam, Antwerp and Havre, and from Capetown to Cairo.

The mills are equipped with the most modern and efficient machinery, including electrically driven planers with individual motors, and there is a monorail delivery at the lower mill direct to the municipal slip. There is storage space for 20,000,000 feet of sawn timbers and dry kiln capacity of 300,000 feet a day. The planers have a capacity of 350,000 feet a day, and there have been loaded twenty-five car loads a day of finished lumber for interior shipments.

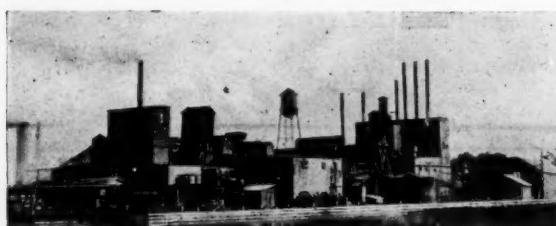
With a thousand names on its payroll and its present actual cut of a million feet of lumber a week, even when not running to full capacity, the Lutcher & Moore Lumber Company has been for years pouring a vitalizing stream of wealth into this community, and with its large acreage of timberland in the watershed of the Sabine, in Texas and Louisiana, a further long life of activity is before it.

A peculiarly intimate relationship exists between the development of Orange and those who have guided the destinies of the Lutcher & Moore Lumber Company. Coming from Williamsport, Pa. in the early 80's, H. J. Lutcher and G. Bedell Moore, lumber men who thought they saw in Southern pine an opportunity for a development impossible in the well-cut timber lands of Pennsylvania, became pioneers in the pine lumber industry South. Up to that time cypress had been the main product of the mills in this section, and pine had not yet taken its place. Locating at Orange and establishing a mill here, H. J. Lutcher gave full vent to his conviction that there was a great future in Southern pine, and money and credit were used to the utmost to secure holdings of pine lands. Fighting his way through every difficulty, Mr. Lutcher left at his death, some years ago, a firmly established business with enormous assets, and which has made millionaires of all who had holdings in the company. Mr. Moore had previously retired with a competence and removed to San Antonio, where he died.

Mrs. Lutcher, who had known real deprivation and the drudgery of servantless housekeeping in the years of early struggle, survives, a keenly alert woman of affairs, who closely watches over the large interests which she has retained. Her interest in life is undiminished, and after a visit in California, to which she recently started overland in her motor car, she will go with some friends for one of her frequent visits to Europe, and on this occasion will see the Passion Play at Oberammergau.

Her interest in humanitarian work and in religious matters has always been keen. When the company proposed to name a new logging camp after her she saw that it was made a model village in every possible way—sanitation, comfort,

June 29, 1922
Descriptive Advertisement.



YELLOW PINE PAPER MILL.

sightlessness, building construction, and every thing. As a memorial to her husband, she built the Lutcher Memorial Presbyterian Church, the most imposing structure and the most beautiful in finish and appointment to be found in the South. Costing \$500,000, a like sum has been expended on a general hospital here, the Frances Ann Lutcher hospital, which is equally notable among institutions of its kind.

These are the public benefactions, of which every one has knowledge, but they are simply conspicuous manifestations of a spirit of helpfulness which finds expression daily in a thousand lesser ways. There is no public work or community undertaking in which the Lutcher-Moore interests do not bear a major part of the load, and to all of these activities Mrs. Lutcher gives sympathetic interest and cooperation.

Two daughters were born to Mr. and Mrs. Lutcher, one of whom married Mr. W. H. Stark and the other Dr. E. W. Brown. Mr. Stark has been an able, public-spirited successor to the founder of the company, and is president of the company now. His son, H. J. Lutcher Stark, is a vice president of the company and distinctly of the Lutcher mold. A leader as a young man, keenly interested in business, in community affairs, in church work and in such activities as the Rotary Club, of which he is an international officer, it is inevitable that he will increase in influence, in power and command as the years go by.

In keeping with the Lutcher traditions, F. H. Farwell, following a training in the ranks, became general manager of the company and is a forceful factor in holding the business to the highest degree of efficiency and also in furthering every public undertaking having the interest and advancement of the community at heart.

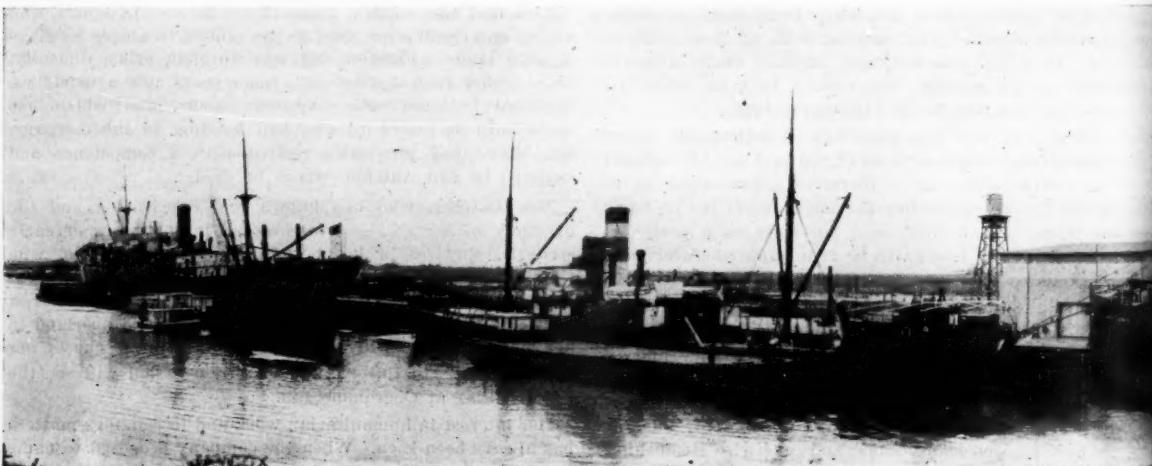
To a degree seldom equaled, the Lutcher-Moore spirit and influence have permeated and energized industrial, commercial, financial and social activities at Orange. Even the mill

itself has been a training school for executives, and graduates from that plant are found today in charge of important operations from Johannesburg, South Africa, to Alberta, Saskatchewan, and from Honolulu to Hong Kong.

After bearing a full part in the activities of the lumber company and other enterprises, Dr. Brown died in comparatively early life a few years ago. His heirs relinquished some of their holdings in the lumber company not long after his death. His son, H. Lutcher Brown, who also inherits the Lutcher traits of forcefulness, energy and ability in business, is, at 26 years of age, president of the Orange National Bank—the youngest National Bank president in the country, so it is said. He is largely interested in many other undertakings among them the Yellow Pine Paper Mill Company, of which he is active vice-president. This paper mill was started some twenty years ago, at a time when a venture in paper making from Southern pine was a perilous voyage on an uncharted sea. Hearing that an attempt was being made at Pensacola, Fla., to utilize saw mill waste for the manufacture of paper, the Lutcher-Moore interests and the Miller-Link interests sent J. W. Link to make an investigation. He was so impressed with the possibilities and the price at which he could get the plant that he bought it outright and brought it back with him. The Orange Paper Company was organized, with J. W. Link, Dr. E. W. Brown, W. H. Stark, L. Miller and F. H. Farwell as stockholders and officers. The soda ash process was employed, and there were insurmountable difficulties encountered and great losses incurred. Finally the sulphate process was adopted, the plant rebuilt and greatly enlarged, and then under the management of Mr. George S. Holmes, the enterprise started on a career of great success.

In the beginning no one in the world knew anything about making paper from Southern pine, and very few knew about the sulphate process anyhow. The first mill on the American continent to use the sulphate process was the Brompton Pulp and Paper Company of Quebec, which began its use in 1909. The Orange mill was the fifth or sixth on the American continent to adopt the sulphate process, which is now the basis of numerous operations throughout the South, so that paper manufacture of Southern pine promises to become an industry of increasingly great importance.

The Orange mill operates exclusively on kraft paper, for wrapping-paper and bags. It is built to 25 tons daily capacity, but by efficiency and speeding up the output runs to about 40 tons. There is a payroll of 260 men and with shifts the plant runs all the time.



SHIPPING SCENE ALONG WHARVES AND DOCKS AT ORANGE. THE ENTIRE WATER FRONT IS UNINCORPORATED.

June 29, 1922.
Descriptive Advertisement.

MANUFACTURERS RECORD.

The mills cut much closer than they formerly did and utilize the smaller pieces. No refuse whatever is now available for paper making. Such refuse as is unavoidable is used to feed the boilers at the saw mill. At the Lutcher-Moore mill an electrical generating plant of 2500 horse power is installed, and this power is delivered by transmission lines to the paper plant. At the paper mill there is a steam plant, with oil burner boilers, providing 1500 additional horse power.

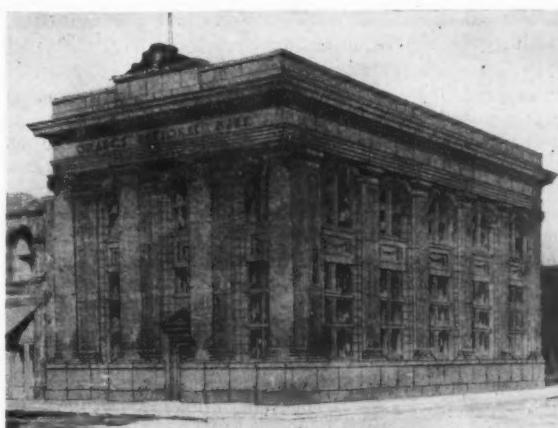
Pine cord wood is used for making the pulp. Two men are out buying cord wood for pulp purposes all the time, and in addition farmers bring in by wagon a portion of the cord wood. In this section second growth pine becomes large enough for paper making purposes within 10 years, so there is no apprehension of a shortage in material.

Present capitalization of the Yellow Pine Paper Mill Company is \$1,000,000. It is stated that at least \$1,750,000 has been spent on the enterprise, first and last, much of it in experimental work. Could the plant be rebuilt at this time, in the light of knowledge which long years of experimentation have brought, a considerable overhead could, of course, be eliminated. But the enterprise is on a fine financial footing now, operating on a gratifying commercial basis, and is an industry which adds lustre to Orange's prestige.

Taking the kraft paper directly from the mill, with which it is connected by a passage way, the E. Z. Opener Bag Company has one of its chain of factories here, with a daily capacity of 2,500,000 bags, large and small—an industry of no mean proportions in itself.

Antedating the advent of the Lutcher-Moore interests the brothers Bancroft, Geo. W., Arthur and Eugene, operated cypress saw mills at Orange. Subsequently they secured a large acreage of exceptionally fine pine stumpage, and when John H. Kirby began his extensive operations in the way of consolidating Texas pine mills and holdings, the Bancrofts parted with their interests to the Kirby Company. The saw mill was subsequently sold to Miller & Link, and afterwards shut down, so the Lutcher & Moore Company has the only lumber operation here at the present time.

The rice industry of Orange totals \$1,750,000 a year. The single mill in Orange ranks with the largest rice mills on the coast, having an average annual turn-out of 33,000,000 pounds of rice and 12,000,000 pounds of mixed feed. Rice consigned to United Kingdom ports, to Hamburg and Rotterdam, constituted the first shipment of merchandise from Orange to Europe, a year ago. Another ship will shortly carry a similar cargo to Europe. Tampico, Havana and Porto Rico receive

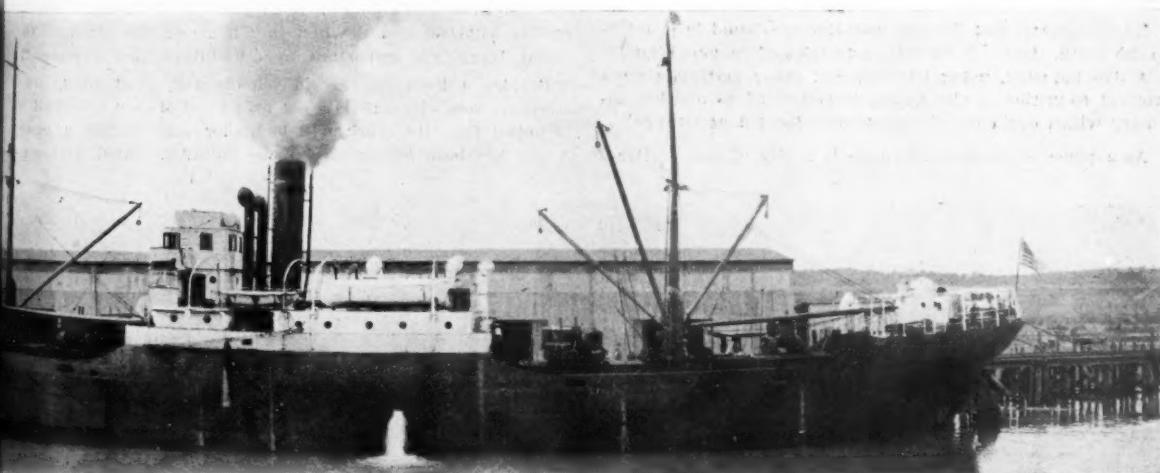


ORANGE NATIONAL BANK BUILDING.

frequent shipments. Rice, which largely comes to Orange by the Intercoastal Canal, is thus an important factor in the commerce of the port.

While as much as 15,000 acres have been put in rice in Orange county in the past, the fertility of the soil makes it so well adapted to the more profitable purposes of truck and small fruit growing that a greater expansion in this direction is anticipated. An agronomist from Washington has reported that with aeration the soil of Orange county is perfect for strawberry growing, and it is stated that an expert in this line has raised \$3000 worth of strawberries on one acre of this land. It is said to be perfectly adapted to celery growing as well, and in fact altogether suitable for all kinds of truck crops.

The industrial adaptability of Orange was strikingly manifested in the shipbuilding era, when six companies were in operation here and Orange became the greatest wooden shipbuilding center east of the Pacific coast. One of the largest companies, the Southern Dry Dock and Shipbuilding Company, with an authorized capitalization of \$200,000, readjusted itself to car building and repairing. There is only one other independent plant of its size in the South specializing on freight car building, it is stated, and so successful are its operations along the new lines that a heavy load of indebtedness and obligations incurred in shipbuilding has



ONT IS MUNICIPALLY OWNED RAILROAD AND THE PORT FACILITIES ARE BEING STEADILY IMPROVED.

been wiped out, and the balance is now on the right side of the ledger. The two shipbuilding plants that remain in operation here are devoted to the building and repairing of smaller craft.

The profitable operations of a box factory, engaged in making wooden crates for fruit, the product being shipped to many parts of the United States and to the West Indies, suggests the opportunities for a variety of wood working plants. Besides the great pine mill here, there are opportunities for hardwood operations that would utilize the timbers in the Sabine and the Neches valleys. An organized movement is now under way throughout the South to interest furniture manufacturers and others in establishing plants to work up into finished form the products that are now sent from here to Grand Rapids and other centers North for manufacture into articles returned to the South for purchase and use.

Labor conditions are excellent at Orange. A peculiarly inviting climatic condition makes living at Orange comfortable and economical, so much so that with the collapse of the shipbuilding industry many of the 5000 workers who had come in were anxious to remain, and did so wherever profitable employment could be obtained. It is not believed that any difficulty would occur in attracting and holding the necessary help for any industry that might locate here.

Winter conditions are so attractive that Orange has been selected as the permanent training camp of the St. Louis Cardinals, and here Judge Landis sojourned awhile during the past winter.

With pure artesian water in apparently inexhaustible quantity, it is felt that among other industries this should be an attractive location for chemical factories, as here could be assembled the sulphur and the salt of Louisiana and Texas, and also such materials as might need to be imported. Only pockets of gas have so far been found in the Orange oil field, but should expectations be realized and an extensive field be developed here, large and enduring fields of gas would almost certainly be discovered.

With cheap factory sites and superior shipping facilities by water and rail, it is regarded as altogether feasible for glass factories to locate here, where there is an abundance of the best glass sands. Even should no large supply of natural gas be found in this field, it is pointed out that the modern practice is to distill oil or coal to produce gas, instead of moving a glass factory to a fresh field of gas, as was formerly the custom when the local supply of gas became exhausted.

Kaolins, marls and clays in quantity are found in counties to the north, the basis for clay industries of various kinds.

A dye industry, using logwood and other materials from tropical countries to the South, is talked of as another industry which could be advantageously located at Orange.

As a place of residence, Orange is a city of many attrac-

tions and is destined, it is believed, to become an increasingly popular winter resort for the people of the North. Its tree-lined residence streets, its many beautiful homes and its imposing churches at once impress the visitor with a feeling of confidence in the stability of the people. There is a confirmation of this belief in the status of the schools, for the claim is made that Orange has the best school system of any city of 15,000 population in Texas or almost anywhere. The school buildings are no less impressive than the churches and the homes. Already \$459,000 has been invested here in new, modern schools, and a proposed bond issue of \$175,000 for a new school building was recently carried by a vote of 21 to 1. Orange spent on its schools last year a sum equal to \$8.40 for every man, woman and child in the city, a record not equaled per capita by any city in the State.

School facilities and good roads and streets are cardinal points in the administration of Mayor Lea. With a deep water port and good roads, he holds that a firm foundation for material progress has been laid. With the school facilities the best that can be given, the future well-being of the community is assured.

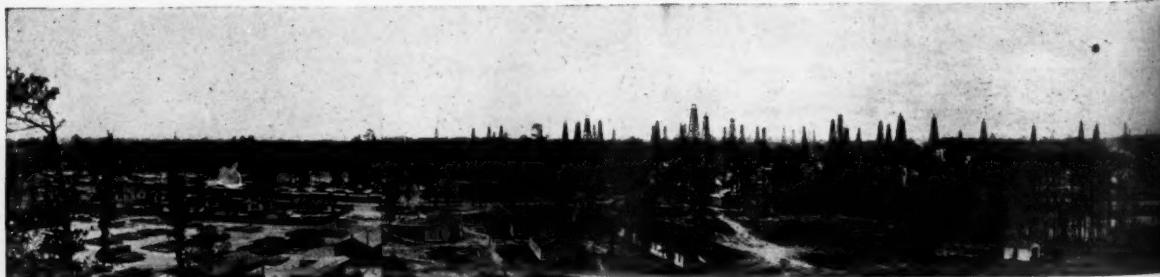
Up to last August there was not one block of modern paving in the 45 miles of streets the city contains. The nearest approach were gravel and shell roads. No public funds being then available, Mayor Lea appealed to property owners and gained their consent to lay 24 blocks of concrete street paving, with adequate drainage beneath. The city paid only for the intersections of the streets. Work is now under way on five and a half miles of additional street paving, of the same type, which will cost about \$400,000.

The business men of Orange, under the leadership of Lutcher Brown, subscribed \$70,000 in little more than an hour to build a six mile plank road to the oil fields, the roads having become literally impassable following the winter rains. Before next winter a concrete road will be laid to the fields.

A \$3,000,000 program of concrete road construction is being carried out, which will give Orange county a 26 mile link in the Old Spanish Trail, extending from Tampa, Fla., to Los Angeles, California. Of this road some 18 miles were completed last year, including one and a half miles within the city limits. Concrete bridges across the Sabine and the Neches are included in the improvement, which will be carried to completion with all possible expedition.

A recent spurt in building activity includes the proposed construction of a Masonic Temple, to cost \$150,000; an Odd Fellows building to cost \$100,000 to \$125,000, a business block by the Starks, and numerous residences. A Methodist Church, costing \$125,000 and the imposing home of the Orange National Bank, are important new buildings just completed.

Besides a keen interest in schools and good roads and streets, a new city hall is a pet project of Mayor Lea, and it is hoped that the work will be under way within a year. A site has been purchased for the building, which will com-



PANORAMA VIEW OF OIL FIELDS, ORANGE COUNTY, TEX., SHOWING THE TREMENDOUS EXPANSION OF THE OIL INDUSTRY SINCE 1915.

June 29, 1922.
Descriptive Advertisement.

tain an auditorium 150 by 90 feet, and also a fire station for the remarkably efficient volunteer fire department. Because of the vigilance and good work of the fire department Orange has been given a very low insurance rate. During April the fire loss was \$35, and for the entire year of 1921 it totaled \$31,893.82. \$10,000,000 fire insurance is carried in the city.

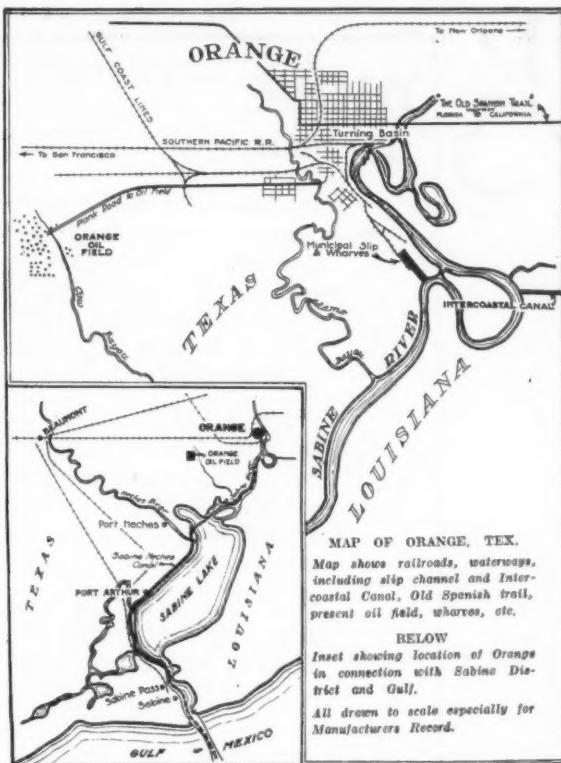
From this presentation of conditions existing, with preparation for a greater growth irrespective of oil, and a determination to use every means to bring about a steady, permanent development here, it is apparent that the bringing in of a really big oil field will simply add further impetus to the work in hand. The oil development, with its refineries and the building and expansion an oil development always brings, will merely be an extra force, not the single factor on which hopes and reliance are based.

According to the figures published there is a present oil production in the Orange field of 15,000 to 20,000 barrels a day. Were all the wells freely producing, it is declared the production would be around 50,000 barrels a day. The great well of the field, the Humble Chesson No. 5 was completed for 30,000 barrels in December of last year. It has produced about 1,250,000 barrels to date, and is still flowing, at better than 1000 barrels at the present time. One well to the northwest of the present field has been producing steadily for nine years. There are some seventy wells producing in the present field, which is one and a half miles long by one and a quarter miles wide.

There is enormous gas pressure in the wells here; a considerable amount of water is present; oil is found in some 18 of the sands, none of which is of firm structure, so that wells sand and paraffine up easily, and for these reasons it is widely believed that the present field constitutes edge wells and that the real mother pool is as yet undiscovered. Locations have been made some miles to the north and northeast of the field, but drilling has not as yet been pushed in these directions.

The lands here are in the hands of strong owners as a rule, and leases have been largely bought up by the big companies. The depth of the prolific sands is between 3100 and 3900 feet, so that a well costs around \$40,000 to drill. Up to this time the principal development has been carried out by the large Texas operators.

The Orange field has not attracted such wide attention as have many other fields of less promise and present performance, and it is usual for oil men from other fields to express much surprise, on coming here, to find conditions so favorable for a possible great oil development, and at the same time such almost complete absence of excitement. Some recent comers are working on plans to try out the territory to the northeast, several miles from the present area of productivity. Should even one of these operators bring in a good well and



MAP OF ORANGE, TEX.
Map shows railroads, waterways, including slip channel and Intercoastal Canal, Old Spanish trail, present oil field, wharves, etc.

RELOW
Inset showing location of Orange in connection with Sabine District and Gulf.

All drawn to scale especially for Manufacturers Record.

should it appear, as many contend, that there is here a true geological structure, not one or more salt domes, it would manifestly be demonstrated that a new and highly promising field has been proven up, and the Orange oil field would then become a development of which everybody would hear.

The facts presented in this paper in regard to Orange, gathered after a close personal study of the situation, indicate how a community of live, aggressive men of broad vision, backed by natural advantages, can within a comparatively brief period create a thriving industrial and commercial city with a broad foundation already laid for continued expansion.

What the people of Orange have achieved is a tribute not only to the location of the town, but a tribute to that broad-minded energy which is here found unceasingly working for the development of individual enterprises and for the betterment of everything which makes for municipal welfare.

Advertisement.



THE OPERATIONS AND GIVING SOME IDEA OF THE IMPORTANCE OF THE INDUSTRY.

June 29, 1922.

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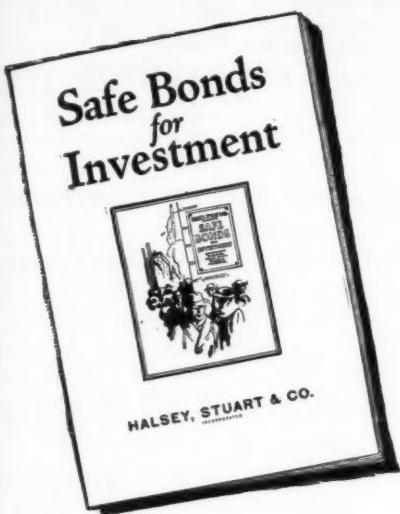
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BALTIMORE, MD.

How a Youngstown Industry Develops and Maintains the Interest and Co-operation of Its Employes—Good Management Essential in Any Organization.

Youngstown, O., June 24.

Editor Manufacturers Record:

In a recent statement to the 12,500 employes of the Youngstown Sheet & Tube Co., upon completion of 20 years of operation under virtually the same management, President James A. Campbell calls attention to some of the problems encountered in directing an enterprise of such dimensions. He emphasizes likewise, the success of the Representation Plan in effect at the company's properties, whereby employees are given a voice in determining working conditions. He also discusses in a timely way the relative position of workers and stockholders.

The company has devoted considerable attention to improving the working and living conditions for its large force of employes, and to this end has spent large sums of money. In the statement of Mr. Campbell on the necessity for management in this particular enterprise as in all other business organizations, he shows that the character of the management is of prime importance in the success of organization, and says further:

"During the 20 years this company has been in existence, there have been some changes in the Board of Directors resulting from natural causes, but there has been no change in its policy. At times there has been some criticism of the management by both stockholders and employes, but this criticism has never been sufficiently severe or persistent to effect a change."

The statement then emphasizes the fact that the stockholders are the court of last resort, and if dissatisfied they can change the management by electing new directors who in turn may elect new officials, but that in any event management must be continuous. The details of operation, fixing of wages, selling products and prices at which sold, buying of materials and equipment, and many other very important matters must necessarily be left to the head of the organization instead of to the Board of Directors because the head has a more intimate knowledge of conditions surrounding these problems. Mr. Campbell's statement continues:

"This company began with a paid in capital of \$600,000. Since that time many millions have been paid in by old and

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new stockholders, and some of the earnings have been used as capital instead of being paid out as dividends. It has paid out in wages a total of \$156,874,064.58 during the twenty years of its operations.

The management feels that the stockholders should not complain even if they have not had all the earnings paid to them in cash, or if the dividends have not always been as large as they thought they should be. The management is more concerned about the employes than about the stockholders, for we hope to have the former with us always and must see that they are well paid, have as steady employment as possible, have good working conditions, and are as comfortable and contented as any of us can be who are obliged to work for a living. Without employes we cannot operate, and a constantly changing organization, in which men are leaving and others taking their places, is expensive and does not make for efficiency. The surest way for the management to keep its stockholders satisfied is to keep its employes contented, because only in this way can satisfactory results be secured."

To accomplish these ends a first-class emergency hospital has been provided, a drinking water system installed, also efficient safety devices and good sanitary conditions throughout the plant. More important than anything else along this line is the establishment of a Representation Plan which makes available a working method whereby the employes have a voice in determining the conditions under which they work; it provides also against injustice and for redress in cases where any unintentional unfairness is made manifest.

In concluding his statement, Mr. Campbell points out that managers themselves are not infallible, but subject to the same mistakes as those under them. In the last analysis a manager or even the chief executive is simply an employee himself, a man who is doing the best he can under difficult and sometimes disagreeable circumstances. And summing up he says:

"Understanding these facts more clearly, you will, I hope feel more keenly the real interest in your welfare which inspires the management, and perhaps be less inclined to unjustly criticise it for things that may appear to you unnecessary, but are in fact unavoidable in the successful conduct of a business such as that of our company."

CHESTER A. DICKHAUT.

At the Washington, D. C., laboratory of the Bureau of Mines, an investigation has been undertaken to obtain fundamental data on the action of Fuller's earth on petroleum products filtered through this material.

Mr.
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(Seal)

June 29, 1922.

MANUFACTURERS RECORD.

99

New Process for Treating Ores.

Mr. Geo. W. B. Evans, of Wilderness, Va., sends the MANUFACTURERS RECORD the following:

"It is well-known that in a section of the Southern states much gold mining has been done, especially in the past; why it has not been continued to any extent is due to the fact that at certain depths the ores became so refractory they could not be treated at a profit. They were also supposed to be of very low grade.

"About eighteen years since the writer discovered a process for separating gold from sulphide ores, but has been unable to treat them on a commercial scale owing to the fact that there was no machine in existence suitable for that purpose. In the course of time, however, after experimenting with several model machines, he has invented one that will not only treat the ores successfully, but in a highly satisfactory and expeditious manner, at small cost to operate.

"I have been experimenting for several years near Wilderness, in Orange County, Virginia, where there are a number of old mines. Upon one of them I have erected one of the new perfected machines about one-half size, treating the ores from the dump of the several old mines in the neighborhood, and also testing ores from other localities. The average yield in gold and silver has been about \$20 per ton, but some yield as much as \$60 per ton. This should be a considerable factor in the development of mines in the South; for one reason that no matter how refractory the ore, the machine has proved to make a successful treatment.

"The process is quite different from anything heretofore used. The ores, after being pulverized, are put into the machine and are subjected to chemical gases while at a great heat, driving off all volatile substances, and leaving the gold and silver in the ore free, ready for amalgamation, cyaniding or chlorinating.

"Many attempts have been made to treat these refractory ores. These were incomplete and unsatisfactory, resulting in the loss of much money, but the writer appears to have solved the problem, and is now able to prove his statements and claims."

Propaganda for Copper.

By KIRBY THOMAS.

A few mornings after the War "hey day," the copper producers awoke to find that not only had the price for their product fallen even below cost, but that the demand for it was much less than formerly, even taking into consideration the general slackening of all business and the acute curtailment on exports. The principal producers got together to compare notes, and as a result they decided to investigate to find out why the fickle public had become less interested in so desirable a product as the red metal. The services of a unique organization, especially experienced in trouble finding, were arranged for and in due time it was reported in effect that copper was going out of fashion. No longer did the housewife covet copper kettles and utensils, nor did the hotel kitchen shine in burnished red. It was alleged that the plumbers had apparently conspired to substitute cheap and less useful iron piping for brass, and that the pin makers and pin users, formerly consuming some 2,000,000 pounds of copper annually, had become content to use iron or steel pins, notwithstanding the ugly rust stains which often resulted.

It was disclosed that door knobs and house fittings, formerly made of brass, were now of iron, poorly plated with some non-corroding metal, or specially treated. It was pointed out that copper roofs had quite gone out of style, and that aluminum cables had been substituted for copper for some electrical purposes, and further that much less brass, a copper-zinc alloy, was used in automobiles. So ran the list of the copper man's woes. What was the remedy?

The answer was obviously education—propaganda—to restore copper to its former favor and demand for the many uses for which its peculiar qualities are specially adapted. As a result, a new "drive" has been systematically instituted, —a beneficial one to all parties, it may be assumed, for copper, besides being a peculiarly useful metal, is distinctively an American metal for this country produces about 60 per cent of the world's supply.

PROPOSALS**BOND ISSUES****BUILDINGS****PAVING****GOOD ROADS**

Bids close July 7, 1922.

United States Engineering Office, Baltimore, Md. Sealed proposals will be received here until 1 P. M., July 7, 1922, and then opened, for dredging Wicomico River, Maryland. Further information on application.

Bids close July 3, 1922.

\$150,000 Road Bonds

Indianola, Miss.

Notice is hereby given that the Board of Supervisors of Sunflower County, Miss., will, at its regular meeting to be held on Monday, the third day of July, 1922, receive sealed bids for the sale of road bonds of Supervisors' District No. Two to the amount of \$150,000, to mature not later than twenty-five years from date, and to bear interest at a rate not greater than 6 per cent per annum, payable annually for the purpose of constructing permanent roads in Supervisors' District No. Two, County and State aforesaid, under the provisions of Chapter 176 of the Laws of 1914, and the amendments thereto. All bids must be accompanied by a certified check on some bank in Sunflower County, Miss., in the sum of \$7500. The Board reserves the right to reject any and all bids, and to receive additional oral or sealed bids for said bonds.

This 7th day of June, A. D. 1922.
(Seal) JOHN W. JOHNSON,
Chancellor Clerk.

RATE: 35 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 4 P. M. Monday.

DAY LETTER: When too late to send copy by mail to reach us by 4 P. M. Monday, forward by day letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—35 cents per line per insertion.

Bids close July 18, 1922.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 20, 1922. SEALED PROPOSALS will be opened in this office at 3 p. m., July 18, 1922, for a Fire Alarm System at the U. S. Veterans' Hospital, Tuskegee, Alabama, in accordance with drawing and specification, which may be had at this office in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect.

Bids close July 20, 1922.

\$80,000 6% Road and Bridge Bonds

Palatka, Fla.

Sealed proposals will be received until July 20, 1922, for \$80,000 Special Road and Bridge District No. 5 Bonds, in Putnam County, Florida, being 80 bonds of \$1000 each, drawing six per cent per annum, payable semi-annually, principal and interest payable at Hanover National Bank of New York City, due from three to 23 years after date. For further information and form of proposal write R. J. Hancock, Clerk, Palatka, Fla.

W. F. GLYNN, chairman,
Board County Commissioners,
Putnam County, Florida.
R. J. HANCOCK, Clerk,

Bids close July 15, 1922.

Drainage Bonds For Sale

Madison, Ga.

Bids are invited for 8% drainage bonds of the Sugar Creek Drainage District, Morgan and Putnam Counties, Georgia, at office of Secretary, T. H. Burress, Jr., at Madison, Ga., on Saturday, July 15, 1922. District has 24 of 28 miles completed. Issue of a little over \$48,000 matures one-tenth each in the years 1924 to 1933, both inclusive.

G. D. PERRY, Chairman,
R. B. PIRKLE,
J. B. HARRISS,
Board of Drainage Commissioners of Sugar Creek Drainage District.

Bids close July 10, 1922.

\$25,000 6% Warrants

Perry, Fla.

The Board of Public Instruction of Taylor County, Florida, will up to the hour of two o'clock P. M. on July 10, 1922, receive bids for the purchase of interest-bearing coupon warrants in the sum of Twenty-five Thousand (\$25,000) Dollars, two one thousand (\$1000) dollars warrants and one five hundred (\$500) dollars warrant maturing each year for ten years beginning July 1, 1922. Warrants bear interest at six (6) per cent per annum and interest coupons mature January 1st and July 1st of each year.

The Board requires that each bid be accompanied by cashier's check for \$1000 payable to the Board of Public Instruction of Taylor County, Florida. It also reserves the right to reject any and all bids. Address:

W. T. CASH,
County Supt.

Bids close July 6, 1922.

\$120,000 6% School Bonds

Arcadia, La., June 6, 1922.

Notice is hereby given that on Thursday, July 6, 1922, at 12 o'clock, M., at their office in the town of Arcadia, La., the Bienville Parish School Board will offer for sale a bond issue of School District No. 1, Bienville Parish, Louisiana, for \$100,000, serial bonds for 20 years bearing interest at the rate of 6% per annum, payable semi-annually, denomination \$1000.

At the same time and place they will also offer for sale bonds of School District No. 16, for \$20,000, for 10 years, serial bonds in denominations of \$500. Interest at the rate of 6% per annum, payable semi-annually. Right reserved to reject any and all bids.

E. H. FISHER, Secy.-Treas.
Bienville Parish School Board.

Bids close July 3, 1922.

\$40,000 School Bonds

Indianola, Miss.

Notice is hereby given that the Board of Supervisors of Sunflower County, Mississippi, will, at its regular July, 1922, meeting, receive bids for bonds of the Linn Consolidated School District, in an amount not to exceed \$40,000, said bonds to bear interest at not more than six per centum per annum, payable semi-annually, and to be issued in accordance with Chapter 207 of the laws of 1920, for the purpose of building and equipping a school house and teacher's home and purchasing land upon which to erect said buildings, in said district. Sealed bids may be filed with the Clerk of the Board up until 2 o'clock P. M., on Monday, the 3rd day of July, 1922. All bids to be accompanied by certified check on some bank in Sunflower County, Mississippi, in the sum of \$2000. The Board reserves the right to reject any and all bids, and also at said meeting to receive oral bids, if they consider it advisable.

Witness my signature this the 7th day of June, 1922.

JOHN W. JOHNSON, Chancery Clerk,
Clerk of Board of Supervisors.

Bids close July 18, 1922.

\$98,000 5% Municipal Bonds

Quincy, Fla.

The City of Quincy, Fla., offers its 5% interest bearing bonds to the amount of \$98,000.00, serial bonds, \$2,000.00 of same being payable and redeemable annually in sequence of their numbers beginning with number One (1); \$40,000.00 being paving bonds, \$40,000.00 City Water and Electric Light bonds; \$14,000.00 of Water Main bonds and \$40,000.00 being Sewer Main bonds, and sealed bids for the entire amount, or for paving bonds, city Electric Light and Water bonds, Sewer Main bonds, or for Water Main bonds, separately will be received at the office of J. P. Smith, City Clerk, up to July 18, 1922, at 10 o'clock A. M.

A certified check or Cashier's check for 5% of the amount bid is required with each bid, and the right to reject any and all bids is reserved by the City.

Under the City Charter Bonds cannot be sold below par.

W. E. SHELFER,
President of City Council of the
City of Quincy, Fla.

J. P. SMITH,
City Clerk.

Bids close July 10, 1922.

\$60,000 6% School Bonds

Minden, La.

The Webster Parish School Board, of Minden, Webster Parish, La., acting as the governing authority for Cotton Valley School District No. 12, of Webster Parish, La., offers School Bonds for sale for said District, SIXTY (60) in number, payable in installments annually in denominations of \$1000, each in serial form to run for a period of sixteen years at the rate of six per cent per annum interest payable annually, secured by special tax to be levied under Act 46 of the Legislature of the State of Louisiana, of Special Session of 1921, for which sealed bids will be received by the Webster Parish School Board to be opened at a meeting of the Board at the Courthouse in Minden, La., at 2 o'clock P. M., July 10th, 1922, at which time and place the bids will be passed upon. Board reserves the right to reject any and all bids. No bid will be considered unless accompanied by a deposit of 5 per cent of the amount of the bid in certified bank check as a guarantee of good faith and subject to collection as a forfeit, in the event the depositor is successful bidder and does not comply with the terms and conditions of this bid.

For information apply to E. S. Richardson, Superintendent and Secretary of the School Board at Minden, La.

Signed this 10th day of June, 1922.

W. G. STEWART,
President of School Board
E. S. RICHARDSON,
Secretary of School Board.

Bids close July 1, 1922.

\$51,000 Water Bonds

\$74,000 Public Improvement Bonds

Southern Pines, N. C.

Sealed proposals will be received by the Board of Commissioners of the Town of South Pines, N. C., at the Mayor's office in said Town, until July 1, 1922, at 12 o'clock, noon, when they will be publicly opened, for the purchase of \$51,000 Water Bonds and \$74,000 Public Improvement Bonds of said Town. Said bonds will be dated July 1, 1922, will bear interest, payable semi-annually on July 1 and January 1, and will be of the denomination of \$1000 each. The Water Bonds will mature serially, one bond on July 1 in each of the years 1925 to 1949, inclusive, and two bonds on July 1 in each of the years 1950 to 1962, inclusive. The Public Improvement Bonds will mature serially, two bonds on July 1 in each year of the years 1925 to 1929, inclusive, four bonds on July 1 in each of the years 1930 to 1940, inclusive, and five bonds on July 1 in each of the years 1941 to 1944, inclusive. All of the bonds will be coupon bonds, with privilege of conversion into fully registered bonds. Principal and interest will be payable in gold coin of the United States, at The National Park Bank, in the City of New York, and interest on registered bonds will, at the option of the holder, be paid in New York exchange.

Bidders are requested to submit bids for 5½%, 5¾% and 6% bonds. No bid for 6% bonds will be considered if a legally acceptable bid for 5½% bonds is submitted, and no bid for either 6% or 5¾% bonds will be considered if a legally acceptable bid for 5½% bonds is submitted.

Proposals must be enclosed in a sealed envelope marked on the outside "Proposal for Bonds," and addressed to R. L. Chandler, Town Clerk, Southern Pines, N. C. Bidders must deposit with said Town Clerk before making their bids, or present with their bids, a certified check drawn to the order of the Town of Southern Pines, upon an incorporated bank or trust company, or a sum of money for or in an amount equal to two per centum (2%) of the face amount of bonds bid for, to secure the municipality against loss resulting from a failure of the bidder to comply with the terms of his bid. Purchasers must pay accrued interest from date of the bonds to the date of delivery. The bonds cannot be sold at less than par and accrued interest.

Successful bidders will be furnished with the opinion of Messrs. Reed, Dougherty & Hoyt, of New York City, that the bonds are valid and binding obligations of the Town of Southern Pines.

Dated June, 1922. R. L. CHANDLER,
Town Clerk.

Bids close July 7, 1922.

\$500,000 5% Road and Bridge Bonds

SUMTER COUNTY, SOUTH CAROLINA
Sumter, S. C.

Sealed proposals will be received by the Sumter County Permanent Road Commission, in care of the undersigned, at its office in Sumter, South Carolina, until twelve o'clock M., July 7th, 1922, for the purchase of all or any part of the above bonds, dated July 1, 1922, denomination \$1000 principal and semi-annual interest (J. and J. I.) payable in New York, registrable as to principal with interest at 5 per centum per annum, maturing \$20,000 annually July 1, 1920 to 1950, both inclusive.

The bonds are to be prepared under the supervision of the United States Mortgage & Trust Company, of New York City, which will certify as to the genuineness of the signatures of the officials and seal impressed thereon. Purchaser will procure legal opinion as to validity of bonds at his expense.

The bonds are general obligations of the County, payable from an unlimited tax. Proposals are required on blank forms, which will be furnished by the undersigned or said Trust Company, and must be enclosed in a sealed envelope marked "Proposal for bonds," and be accompanied by a certified check for 2 per cent, of face amount of bonds bid for, payable to the order of the County Treasurer, and drawn upon a bank or trust company doing business in South Carolina, or upon a national bank in any place. Bonds will be delivered at place of purchaser's election on or about Aug. 1, 1922. The right to reject any or all bids is reserved.

L. L. HUNTER,
Secretary Sumter County Permanent
Road Commission.

Bids close July 10, 1922.

\$210,000 6% School Bonds

Minden, La.

The Webster Parish School Board of Minden, Webster Parish, Louisiana, acting as the governing authority for Minden School District No. 6, of Webster Parish, Louisiana, offers school bonds for sale for said District, TWO HUNDRED AND TEN (210) in number, payable in installments annually in denominations of \$1000, each in serial form to run for a period of 10 years, at the rate of six per cent per annum interest payable annually, secured by special tax to be levied under Act 46 of the Legislature of the State of Louisiana, of Special Session of 1921, for which sealed bids will be received by the Webster Parish School Board to be opened at a meeting of the Board at the Court House in Minden, Louisiana, at 2 o'clock P. M., July 10, 1922, at which time and place the bids will be passed upon. Board reserves the right to reject any and all bids. No bid will be considered unless accompanied by a deposit of five per cent of the amount of the bid in certified bank check as a guarantee of good faith and subject to collection as a forfeit, in the event the depositor is successful bidder and does not comply with the terms and conditions of his bid.

For information apply to E. S. Richardson, Superintendent and Secretary of the School Board at Minden, La.

Signed this 9th day of June, 1922.
W. C. STEWART,
President of School Board.
E. S. RICHARDSON,
Secretary of School Board.

Bids close July 14, 1922.

Bridge Sub-structure and Approach Spans

Nashville, Tenn.

SEALED BIDS will be received by the Department of Highways, State of Tennessee, at Nashville, Tenn., until 10 o'clock a. m., Friday, July 14, 1922, and opened publicly at that place and hour, for the construction of the concrete sub-structure and the reinforced concrete approach spans of Federal Aid Project 16, being a bridge over Cumberland river, near Clarksville, having approximately 1392 feet aggregate of span.

Plans and specifications are on file in the office of the Chief Engineer, Department of Highways, Nashville, Tenn., and in the office of the Division Engineer, Department of Highways, Nashville, Tenn.

D. Q. McCOMB,
Chief Engineer.

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